

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Avi Ashkenazi, et al. Serial No.: Filed herewith Filed: Herewith For: <i>Secreted and Transmembrane Polypeptides and Nucleic Acids Encoding the Same</i>	Group Art Unit: Not yet assigned Examiner: Not yet assigned Express Mail No: EL 895 375 467 US Mailed: November 15, 2001
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CERTIFICATE RE: SEQUENCE LISTING

RESPONSE UNDER 37 CFR § 1.821(f) and (g)

Box: Patent Application
Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

I hereby state that the Sequence Listing submitted herewith is submitted in paper copy and a computer-readable diskette, and that the information recorded in computer readable form is identical to the written sequence listing. I further state that this submission includes no new matter.

Respectfully submitted,

GENENTECH, INC.

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Date: November 15, 2001



09157

PATENT TRADEMARK OFFICE

Sequence Listing

<110> Avi J. Ashkenazi
 Kevin P. Baker
 David A. Botstein
 Luc Desnoyers
 Dan L. Eaton
 Napoleone Ferrara
 Sherman Fong
 Wei-Qiang Gao
 Hanspeter Gerber
 Mary E. Gerritsen
 Audrey Goddard
 Paul J. Godowski
 Austin L. Gurney
 Ivar J. Kljavin
 Jennie P. Mather
 Mary A. Napier
 James Pan
 Nicholas F. Paoni
 Margaret Ann Roy
 Timothy A. Stewart
 Daniel Tumas
 Colin K. Watanabe
 P.Mickey Williams
 William I. Wood
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Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val
35 40 45

Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg
50 55 60

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 ctggacttgg aatgatcac tgtcaacact gtcacaaact tcagaggcag 1750
 ctccgtgatc cgactgcgga tatatgtgtc gcagtacca ttctgagcct 1800

	380		385		390
Glu Phe Tyr Met Arg Gln Thr Gly Pro Ile Ser Ala Thr Leu Val					
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Met Thr Arg Pro Ile Lys Gly Pro Arg Glu Ile Gln Leu Asp Leu					
	410		415		420
Glu Met Ile Thr Val Asn Thr Val Ile Asn Phe Arg Gly Ser Ser					
	425		430		435
Val Ile Arg Leu Arg Ile Tyr Val Ser Gln Tyr Pro Phe					
	440		445		

<210> 16
 <211> 2447
 <212> DNA
 <213> Homo Sapien

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<210> 17

<211> 428

<212> PRT

<213> Homo Sapien

<400> 17

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				20					25					30	
Phe	Gln	Ile	Ala	Asp	Cys	Ala	Tyr	Arg	Asp	Leu	Glu	Ser	Val	Pro	
				35					40					45	
Pro	Gly	Phe	Pro	Ala	Asn	Val	Thr	Thr	Leu	Ser	Leu	Ser	Ala	Asn	
				50					55					60	
Arg	Leu	Pro	Gly	Leu	Pro	Glu	Gly	Ala	Phe	Arg	Glu	Val	Pro	Leu	
				65					70					75	
Leu	Gln	Ser	Leu	Trp	Leu	Ala	His	Asn	Glu	Ile	Arg	Thr	Val	Ala	
				80					85					90	
Ala	Gly	Ala	Leu	Ala	Ser	Leu	Ser	His	Leu	Lys	Ser	Leu	Asp	Leu	
				95					100					105	
Ser	His	Asn	Leu	Ile	Ser	Asp	Phe	Ala	Trp	Ser	Asp	Leu	His	Asn	
				110					115					120	
Leu	Ser	Ala	Leu	Gln	Leu	Leu	Lys	Met	Asp	Ser	Asn	Glu	Leu	Thr	
				125					130					135	
Phe	Ile	Pro	Arg	Asp	Ala	Phe	Arg	Ser	Leu	Arg	Ala	Leu	Arg	Ser	
				140					145					150	
Leu	Gln	Leu	Asn	His	Asn	Arg	Leu	His	Thr	Leu	Ala	Glu	Gly	Thr	
				155					160					165	
Phe	Thr	Pro	Leu	Thr	Ala	Leu	Ser	His	Leu	Gln	Ile	Asn	Glu	Asn	
				170					175					180	
Pro	Phe	Asp	Cys	Thr	Cys	Gly	Ile	Val	Trp	Leu	Lys	Thr	Trp	Ala	
				185					190					195	
Leu	Thr	Thr	Ala	Val	Ser	Ile	Pro	Glu	Gln	Asp	Asn	Ile	Ala	Cys	
				200					205					210	
Thr	Ser	Pro	His	Val	Leu	Lys	Gly	Thr	Pro	Leu	Ser	Arg	Leu	Pro	
				215					220					225	
Pro	Leu	Pro	Cys	Ser	Ala	Pro	Ser	Val	Gln	Leu	Ser	Tyr	Gln	Pro	
				230					235					240	
Ser	Gln	Asp	Gly	Ala	Glu	Leu	Arg	Pro	Gly	Phe	Val	Leu	Ala	Leu	
				245					250					255	

His	Cys	Asp	Val	Asp	Gly	Gln	Pro	Ala	Pro	Gln	Leu	His	Trp	His
				260					265					270
Ile	Gln	Ile	Pro	Ser	Gly	Ile	Val	Glu	Ile	Thr	Ser	Pro	Asn	Val
				275					280					285
Gly	Thr	Asp	Gly	Arg	Ala	Leu	Pro	Gly	Thr	Pro	Val	Ala	Ser	Ser
				290					295					300
Gln	Pro	Arg	Phe	Gln	Ala	Phe	Ala	Asn	Gly	Ser	Leu	Leu	Ile	Pro
				305					310					315
Asp	Phe	Gly	Lys	Leu	Glu	Glu	Gly	Thr	Tyr	Ser	Cys	Leu	Ala	Thr
				320					325					330
Asn	Glu	Leu	Gly	Ser	Ala	Glu	Ser	Ser	Val	Asp	Val	Ala	Leu	Ala
				335					340					345
Thr	Pro	Gly	Glu	Gly	Gly	Glu	Asp	Thr	Leu	Gly	Arg	Arg	Phe	His
				350					355					360
Gly	Lys	Ala	Val	Glu	Gly	Lys	Gly	Cys	Tyr	Thr	Val	Asp	Asn	Glu
				365					370					375
Val	Gln	Pro	Ser	Gly	Pro	Glu	Asp	Asn	Val	Val	Ile	Ile	Tyr	Leu
				380					385					390
Ser	Arg	Ala	Gly	Asn	Pro	Glu	Ala	Ala	Val	Ala	Glu	Gly	Val	Pro
				395					400					405
Gly	Gln	Leu	Pro	Pro	Gly	Leu	Leu	Leu	Leu	Gly	Gln	Ser	Leu	Leu
				410					415					420
Leu	Phe	Phe	Phe	Leu	Thr	Ser	Phe							
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<210> 18
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 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 18
 gtggctggca cacaatgaga tc 22

<210> 19
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 19
 ccaatgtgtg caagcggttg tg 22

<210> 20
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 20
 tcaagagcct ggacctcagc cacaatctca tctctgactt tgcctggagc 50

<210> 21
 <211> 2033
 <212> DNA
 <213> Homo Sapien

<400> 21
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 tgccggcacga ggagttttcc cggcagcgag gaggtcctga gcagcatggc 150
 ccggaggagc gccttccttg ccgccgcgct ctggctctgg agcatcctcc 200
 tgtgcctgct ggcaactgcg gcggaggccg ggccgcccga ggaggagagc 250
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 agggagagca gtgtgaaatc agcaaatgcc cacaaccctg tcgaaatgga 1000
 ggtaaagca ttggtaaaag caaatgtaag tggtccaaag gttaccaggg 1050

350 355 360
 Pro Ser Leu Lys Lys Ala Glu Glu Arg Arg Asp Pro Pro Glu Ser
 365 370 375
 Asn Tyr Ile Trp

<210> 23
 <211> 783
 <212> DNA
 <213> Homo Sapien

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 ctggaattga ggctgagcca aagaccccag ggccgtctca gtctcataaa 200
 aggggatcag gcaggaggag tttgggagaa acctgagaag ggcttgattt 250
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 tggggagcct gcggaatctt ttctgaaggc tacatggacc cgctggggag 650
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 tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 750
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 783

<210> 24
 <211> 94
 <212> PRT
 <213> Homo Sapien

<400> 24
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 Leu Ser Leu His Leu Gly Thr Ala Thr Arg Gly Ser Asp Ile Ser
 20 25 30

Lys Thr Cys Cys Phe Gln Tyr Ser His Lys Pro Leu Pro Trp Thr
 35 40 45
 Trp Val Arg Ser Tyr Glu Phe Thr Ser Asn Ser Cys Ser Gln Arg
 50 55 60
 Ala Val Ile Phe Thr Thr Lys Arg Gly Lys Lys Val Cys Thr His
 65 70 75
 Pro Arg Lys Lys Trp Val Gln Lys Tyr Ile Ser Leu Leu Lys Thr
 80 85 90
 Pro Lys Gln Leu

<210> 25
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 25
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<210> 26
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 26
 ggatgggtac agactttctt gcc 23

<210> 27
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 27
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<210> 28
 <211> 3552
 <212> DNA
 <213> Homo Sapien

<400> 28
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 tttggcgctt tcgatccacc ctctccctt ctcatgggac tttggggaca 100

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<210> 29

<211> 386

<212> PRT

<213> Homo Sapien

<400> 29

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				20					25					30
Trp	Leu	Leu	Asp	Pro	Lys	Ile	Leu	Lys	Phe	Val	Val	Phe	Ile	Val
				35					40					45
Ala	Val	Leu	Leu	Pro	Val	Arg	Val	Asp	Ser	Ala	Thr	Ile	Pro	Arg
				50					55					60
Gln	Asp	Glu	Val	Pro	Gln	Gln	Thr	Val	Ala	Pro	Gln	Gln	Gln	Arg
				65					70					75
Arg	Ser	Leu	Lys	Glu	Glu	Glu	Cys	Pro	Ala	Gly	Ser	His	Arg	Ser
				80					85					90
Glu	Tyr	Thr	Gly	Ala	Cys	Asn	Pro	Cys	Thr	Glu	Gly	Val	Asp	Tyr
				95					100					105
Thr	Ile	Ala	Ser	Asn	Asn	Leu	Pro	Ser	Cys	Leu	Leu	Cys	Thr	Val
				110					115					120
Cys	Lys	Ser	Gly	Gln	Thr	Asn	Lys	Ser	Ser	Cys	Thr	Thr	Thr	Arg
				125					130					135
Asp	Thr	Val	Cys	Gln	Cys	Glu	Lys	Gly	Ser	Phe	Gln	Asp	Lys	Asn

Ser	Pro	Glu	Met	Cys	Arg	Thr	Cys	Arg	Thr	Gly	Cys	Pro	Arg	Gly
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Met	Val	Lys	Val	Ser	Asn	Cys	Thr	Pro	Arg	Ser	Asp	Ile	Lys	Cys
				170					175					180
Lys	Asn	Glu	Ser	Ala	Ala	Ser	Ser	Thr	Gly	Lys	Thr	Pro	Ala	Ala
				185					190					195
Glu	Glu	Thr	Val	Thr	Thr	Ile	Leu	Gly	Met	Leu	Ala	Ser	Pro	Tyr
				200					205					210
His	Tyr	Leu	Ile	Ile	Ile	Val	Val	Leu	Val	Ile	Ile	Leu	Ala	Val
				215					220					225
Val	Val	Val	Gly	Phe	Ser	Cys	Arg	Lys	Lys	Phe	Ile	Ser	Tyr	Leu
				230					235					240
Lys	Gly	Ile	Cys	Ser	Gly	Gly	Gly	Gly	Gly	Pro	Glu	Arg	Val	His
				245					250					255
Arg	Val	Leu	Phe	Arg	Arg	Arg	Ser	Cys	Pro	Ser	Arg	Val	Pro	Gly
				260					265					270
Ala	Glu	Asp	Asn	Ala	Arg	Asn	Glu	Thr	Leu	Ser	Asn	Arg	Tyr	Leu
				275					280					285
Gln	Pro	Thr	Gln	Val	Ser	Glu	Gln	Glu	Ile	Gln	Gly	Gln	Glu	Leu
				290					295					300
Ala	Glu	Leu	Thr	Gly	Val	Thr	Val	Glu	Ser	Pro	Glu	Glu	Pro	Gln
				305					310					315
Arg	Leu	Leu	Glu	Gln	Ala	Glu	Ala	Glu	Gly	Cys	Gln	Arg	Arg	Arg
				320					325					330
Leu	Leu	Val	Pro	Val	Asn	Asp	Ala	Asp	Ser	Ala	Asp	Ile	Ser	Thr
				335					340					345
Leu	Leu	Asp	Ala	Ser	Ala	Thr	Leu	Glu	Glu	Gly	His	Ala	Lys	Glu
				350					355					360
Thr	Ile	Gln	Asp	Gln	Leu	Val	Gly	Ser	Glu	Lys	Leu	Phe	Tyr	Glu
				365					370					375
Glu	Asp	Glu	Ala	Gly	Ser	Ala	Thr	Ser	Cys	Leu				
				380					385					

<210> 30
 <211> 50
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe

<400> 30
cataaaaagtt cctgcaccat gaccagagac acagtgtgtc agtgtaaaga 50

<210> 31
<211> 963
<212> DNA
<213> Homo Sapien

<400> 31
gcggcacctg gaagatgcgc ccattggctg gtggcctgct caaggtggtg 50
ttcgtggtct tcgcctcctt gtgtgcctgg tattcggggt acctgctcgc 100
agagctcatt ccagatgcac ccctgtccag tgetgcctat agcatccgca 150
gcatcgggga gaggcctgtc ctcaaagctc cagtcccca aaggcaaaaa 200
tgtgaccact ggactccctg cccatctgac acctatgcct acaggttact 250
cagcggaggt ggcagaagca agtacgcaa aatctgcttt gaggataacc 300
tactttatggg agaacagctg ggaaatgttg ccagaggaat aaacattgcc 350
attgtcaact atgtaactgg gaatgtgaca gcaacacgat gttttgatat 400
gtatgaaggc gataactctg gaccgatgac aaagtttatt cagagtgtctg 450
ctccaaaatc cctgctcttc atggtgacct atgacgacgg aagcacaaga 500
ctgaataacg atgccaagaa tgccatagaa gcacttggaa gtaaagaaat 550
caggaacatg aaattcaggt ctagctgggt atttattgca gcaaaaggct 600
tggaactccc ttccgaaatt cagagagaaa agatcaacca ctctgatgct 650
aagaacaaca gatattctgg ctggcctgca gagatccaga tagaaggctg 700
catacccaaa gaacgaagct gacactgcag ggtcctgagt aaatgtgttc 750
tgtataaaca aatgcagctg gaatcgctca agaattctat ttttctaaat 800
ccaacagccc atatttgatg agtatcttgg gtttggtgta aaccaatgaa 850
catttgctag ttgtatcaaa tcttggtacg cagtattttt ataccagtat 900
tttatgtagt gaagatgtca attagcagga aactaaaatg aatggaaatt 950
cttaaaaaaa aaa 963

<210> 32
<211> 235
<212> PRT
<213> Homo Sapien

<400> 32
Met Arg Pro Leu Ala Gly Gly Leu Leu Lys Val Val Phe Val Val
1 5 10 15

Phe	Ala	Ser	Leu	Cys	Ala	Trp	Tyr	Ser	Gly	Tyr	Leu	Leu	Ala	Glu	20	25	30
Leu	Ile	Pro	Asp	Ala	Pro	Leu	Ser	Ser	Ala	Ala	Tyr	Ser	Ile	Arg	35	40	45
Ser	Ile	Gly	Glu	Arg	Pro	Val	Leu	Lys	Ala	Pro	Val	Pro	Lys	Arg	50	55	60
Gln	Lys	Cys	Asp	His	Trp	Thr	Pro	Cys	Pro	Ser	Asp	Thr	Tyr	Ala	65	70	75
Tyr	Arg	Leu	Leu	Ser	Gly	Gly	Gly	Arg	Ser	Lys	Tyr	Ala	Lys	Ile	80	85	90
Cys	Phe	Glu	Asp	Asn	Leu	Leu	Met	Gly	Glu	Gln	Leu	Gly	Asn	Val	95	100	105
Ala	Arg	Gly	Ile	Asn	Ile	Ala	Ile	Val	Asn	Tyr	Val	Thr	Gly	Asn	110	115	120
Val	Thr	Ala	Thr	Arg	Cys	Phe	Asp	Met	Tyr	Glu	Gly	Asp	Asn	Ser	125	130	135
Gly	Pro	Met	Thr	Lys	Phe	Ile	Gln	Ser	Ala	Ala	Pro	Lys	Ser	Leu	140	145	150
Leu	Phe	Met	Val	Thr	Tyr	Asp	Asp	Gly	Ser	Thr	Arg	Leu	Asn	Asn	155	160	165
Asp	Ala	Lys	Asn	Ala	Ile	Glu	Ala	Leu	Gly	Ser	Lys	Glu	Ile	Arg	170	175	180
Asn	Met	Lys	Phe	Arg	Ser	Ser	Trp	Val	Phe	Ile	Ala	Ala	Lys	Gly	185	190	195
Leu	Glu	Leu	Pro	Ser	Glu	Ile	Gln	Arg	Glu	Lys	Ile	Asn	His	Ser	200	205	210
Asp	Ala	Lys	Asn	Asn	Arg	Tyr	Ser	Gly	Trp	Pro	Ala	Glu	Ile	Gln	215	220	225
Ile	Glu	Gly	Cys	Ile	Pro	Lys	Glu	Arg	Ser						230	235	

<210> 33

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 33

ggctggcctg cagagatc 18

<210> 34

<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 34
aatgtgacca ctggactccc 20

<210> 35
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 35
aggcttggaa ctccccttc 18

<210> 36
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 36
aagattcttg agcgattcca gctg 24

<210> 37
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 37
aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 38
<211> 1215
<212> DNA
<213> Homo Sapien

<400> 38
ccggggaggg gagggcccgt cccgcccctc cccgtctctc cccgcccctc 50
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cacctcccgg ccgcggctgc cctctgcccg ggttgctcaa gatggagggc 150
gctccaccgg ggtcgcctgc cctccggctc ctgctgttcg tggcgctacc 200
cgctccggc tggctgacga cgggcgcccc cgagccgccc ccgctgtccg 250

Val	Val	Leu	Asn	Ile	Thr	Tyr	Glu	Ser	Gly	Gln	Val	Tyr	Val	Asn	
				65					70					75	
Asp	Leu	Pro	Val	Asn	Ser	Gly	Val	Thr	Arg	Ile	Ser	Cys	Gln	Thr	
				80					85					90	
Leu	Ile	Val	Lys	Asn	Glu	Asn	Leu	Glu	Asn	Leu	Glu	Glu	Lys	Glu	
				95					100					105	
Tyr	Phe	Gly	Ile	Val	Ser	Val	Arg	Ile	Leu	Val	His	Glu	Trp	Pro	
				110					115					120	
Met	Thr	Ser	Gly	Ser	Ser	Leu	Gln	Leu	Ile	Val	Ile	Gln	Glu	Glu	
				125					130					135	
Val	Val	Glu	Ile	Asp	Gly	Lys	Gln	Val	Gln	Gln	Lys	Asp	Val	Thr	
				140					145					150	
Glu	Ile	Asp	Ile	Leu	Val	Lys	Asn	Arg	Gly	Val	Leu	Arg	His	Ser	
				155					160					165	
Asn	Tyr	Thr	Leu	Pro	Leu	Glu	Glu	Ser	Met	Leu	Tyr	Ser	Ile	Ser	
				170					175					180	
Arg	Asp	Ser	Asp	Ile	Leu	Phe	Thr	Leu	Pro	Asn	Leu	Ser	Lys	Lys	
				185					190					195	
Glu	Ser	Val	Ser	Ser	Leu	Gln	Thr	Thr	Ser	Gln	Tyr	Leu	Ile	Arg	
				200					205					210	
Asn	Val	Glu	Thr	Thr	Val	Asp	Glu	Asp	Val	Leu	Pro	Gly	Lys	Leu	
				215					220					225	
Pro	Glu	Thr	Pro	Leu	Arg	Ala	Glu	Pro	Pro	Ser	Ser	Tyr	Lys	Val	
				230					235					240	
Met	Cys	Gln	Trp	Met	Glu	Lys	Phe	Arg	Lys	Asp	Leu	Cys	Arg	Phe	
				245					250					255	
Trp	Ser	Asn	Val	Phe	Pro	Val	Phe	Phe	Gln	Phe	Leu	Asn	Ile	Met	
				260					265					270	
Val	Val	Gly	Ile	Thr	Gly	Ala	Ala	Val	Val	Ile	Thr	Ile	Leu	Lys	
				275					280					285	
Val	Phe	Phe	Pro	Val	Ser	Glu	Tyr	Lys	Gly	Ile	Leu	Gln	Leu	Asp	
				290					295					300	
Lys	Val	Asp	Val	Ile	Pro	Val	Thr	Ala	Ile	Asn	Leu	Tyr	Pro	Asp	
				305					310					315	
Gly	Pro	Glu	Lys	Arg	Ala	Glu	Asn	Leu	Glu	Asp	Lys	Thr	Cys	Ile	
				320					325					330	

<210> 40

<211> 2498

<212> DNA

<213> Homo Sapien

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 43

gggtgggata gacctgcg 18

<210> 44

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 44

aaggccaaga aggctgcc 18

<210> 45

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 45

ccaggcctgc agaccag 18

<210> 46

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 46

cttcctcagt ccttccagga tatc 24

<210> 47

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 47

aagctggata tcctccgtgt tgtc 24

<210> 48

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 48

cctgaagagg catgactgct tttctca 27

<210> 49

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 49

ggggataaac ctattaatta ttgctac 27

<210> 50

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 50

aacgtcacct acatctcctc gtgccacatg cgccaggcca cctg 44

<210> 51

<211> 1690

<212> DNA

<213> Homo Sapien

<400> 51

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cgctgctggg gttgtggctg ttgctgtgca gctgcggatg ccccgagggc 100

gccgagctgc gtgctccgcc agataaaatc gcgattattg gagccggaat 150

tggtggcact tcagcagcct attacctgcg gcagaaattt gggaaagatg 200

tgaagataga cctgtttgaa agagaagagg tcggggggccg cctggctacc 250

atgatggtgc aggggcaaga atacgaggca ggaggttctg tcatccatcc 300

tttaaactctg cacatgaaac gttttgtcaa agacctgggt ctctctgctg 350

ttcaggcctc tggtggccta ctggggatat ataatggaga gactctggta 400

tttgaggaga gcaactggtt cataattaac gtgattaaat tagtttggcg 450

ctatggattt caatccctcc gtatgcacat gtgggtagag gacgtgttag 500

acaagtcat gaggatctac cgctaccagt ctcatgacta tgccttcagt 550

agtgtcgaaa aattacttca tgctctagga ggagatgact tccttggaaat 600

gcttaatcga acacttcttg aaaccttgca aaaggccggc ttttctgaga 650

acccctattg atagaaaaca tgaagaaagc attaagactt attcagtcag 550
 agctataaga gatgatggaa aaaagccttc acttcaaaga agtcaaattt 600
 catgaagaaa acctctggca cattgacaaa tactaaatgt gcaagtatat 650
 agattttgta atattactat ttagtttttt taatgtgttt gcaatagtct 700
 tattaataaata aatgtttttt aaatctga 728

<210> 54
 <211> 166
 <212> PRT
 <213> Homo Sapien

<400> 54
 Met Met Leu His Ser Ala Leu Gly Leu Cys Leu Leu Leu Val Thr
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 Val Ser Ser Asn Leu Ala Ile Ala Ile Lys Lys Glu Lys Arg Pro
 20 25 30
 Pro Gln Thr Leu Ser Arg Gly Trp Gly Asp Asp Ile Thr Trp Val
 35 40 45
 Gln Thr Tyr Glu Glu Gly Leu Phe Tyr Ala Gln Lys Ser Lys Lys
 50 55 60
 Pro Leu Met Val Ile His His Leu Glu Asp Cys Gln Tyr Ser Gln
 65 70 75
 Ala Leu Lys Lys Val Phe Ala Gln Asn Glu Glu Ile Gln Glu Met
 80 85 90
 Ala Gln Asn Lys Phe Ile Met Leu Asn Leu Met His Glu Thr Thr
 95 100 105
 Asp Lys Asn Leu Ser Pro Asp Gly Gln Tyr Val Pro Arg Ile Met
 110 115 120
 Phe Val Asp Pro Ser Leu Thr Val Arg Ala Asp Ile Ala Gly Arg
 125 130 135
 Tyr Ser Asn Arg Leu Tyr Thr Tyr Glu Pro Arg Asp Leu Pro Leu
 140 145 150
 Leu Ile Glu Asn Met Lys Lys Ala Leu Arg Leu Ile Gln Ser Glu
 155 160 165
 Leu

<210> 55
 <211> 537
 <212> DNA
 <213> Homo Sapien

<400> 55

taaaacagct acaatattcc agggccagtc acttgccatt tctcataaca 50
 gcgtcagaga gaaagaactg actgaaacgt ttgagatgaa gaaagttctc 100
 ctctgatca cagccatctt ggcagtggct gttgggttcc cagtctctca 150
 agaccaggaa cgagaaaaaa gaagtatcag tgacagcgat gaattagctt 200
 cagggttttt tgtgttccct taccatatac catttcgccc acttccacca 250
 attccatttc caagatttcc atggtttaga cgtaattttc ctattccaat 300
 acctgaatct gccctacaa cttcccttcc tagcgaaaag taaacaagaa 350
 ggataagtca cgataaacct ggtcacctga aattgaaatt gagccacttc 400
 cttgaagaat caaaattcct gttaataaaa gaaaaacaaa tgtaattgaa 450
 atagcacaca gcattctcta gtcaatatct ttagtgatct tctttaataa 500
 acatgaaagc aaagattttg gtttcttaat ttccaca 537

<210> 56
 <211> 85
 <212> PRT
 <213> Homo Sapien

<400> 56
 Met Lys Lys Val Leu Leu Leu Ile Thr Ala Ile Leu Ala Val Ala
 1 5 10 15
 Val Gly Phe Pro Val Ser Gln Asp Gln Glu Arg Glu Lys Arg Ser
 20 25 30
 Ile Ser Asp Ser Asp Glu Leu Ala Ser Gly Phe Phe Val Phe Pro
 35 40 45
 Tyr Pro Tyr Pro Phe Arg Pro Leu Pro Pro Ile Pro Phe Pro Arg
 50 55 60
 Phe Pro Trp Phe Arg Arg Asn Phe Pro Ile Pro Ile Pro Glu Ser
 65 70 75
 Ala Pro Thr Thr Pro Leu Pro Ser Glu Lys
 80 85

<210> 57
 <211> 2997
 <212> DNA
 <213> Homo Sapien

<400> 57
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 gggccctggg atgcggggcc gtctcgccgc ctgctgccgc tgttgctgct 100
 gctcggcctg gccgcgggag ccgcgggagc gccggggccc gacggtttag 150

acgtctgtgc cacttgccat gaacatgcc aatgccagca aagagaagg 200
aagaagatct gtatttgcaa ctatggattt gtagggaacg ggaggactca 250
gtgtgttgat aaaaatgagt gccagtttgg agccactctt gtctgtggga 300
accacacatc ttgccacaac acccccgggg gcttctattg catttgctg 350
gaaggatata gagccacaaa caacaacaag acattcattc ccaacgatgg 400
caccttttgt acagacatag atgagtgtga agtttctggc ctgtgcaggc 450
atggagggcg atgcgtgaac actcatggga gctttgaatg ctactgtatg 500
gatggatact tgccaaggaa tggacctgaa cttttccacc cgaccaccga 550
tgccacatca tgcacagaaa tagactgtgg taccctcctt gaggttccag 600
atggctatat cataggaaat tatacgtcta gtctgggcag ccagggtcgt 650
tatgcttgca gagaaggatt cttcagtgtt ccagaagata cagtttcaag 700
ctgcacaggc ctgggcacat gggagtcccc aaaattacat tgccaagaga 750
tcaactgtgg caaccctcca gaaatgcggc acgccatctt ggtaggaaat 800
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gtgcctgtag tgtgtttgga tctgtaccct acgactgatt atacggtgaa 1450
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caactcccc agcagtaaaa cagaccatca gtaacatttc aggatttaat 1550
gaaacctgct tgagatggag aagcatcaag acagctgata tggaggagat 1600

gtatttattc cacatttggg gccagagatg gtatcagaag gaatttgccc 1650
 aggaaatgac ctttaatatc agtagcagca gccgagatcc cgaggtgtgc 1700
 ttggacctac gtccgggtac caactacaat gtcagtctcc gggctctgtc 1750
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 ccctcccga agtagaattt ttacgggtgc acagaggacc tctaccacgc 1850
 ctgagactga ggaaagccaa ggagaaaaat ggaccaatca gttcatatca 1900
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 aaggcgcttc ctccctcttt agcaacgcct ctgatgctga tggatactg 2000
 gctgcagaac tactggccaa agatgttcca gatgatgcca tggagatacc 2050
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 gagggagtga ttactgcatt atattacgaa tcacaagtga atggaataag 2150
 gtgagaagac actcctgtgc agtttgggct cagggtgaaag attcgtcact 2200
 catgctgctg cagatggcgg gtgttggact gggttccctg gctgttgtga 2250
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 ttccctgcta caggaccagt tctgtgcaat gaacttgaga ctctgatgt 2550
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 caaatgtttc aagcacttta gaaacagtac ttttctata attagttgat 2850
 atactaatga gaaaatatac tagcctggcc atgccaataa gtttctgct 2900
 gtgtctgtta ggcagcattg ctttgatgca atttctattg tctatatat 2950
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<210> 58
 <211> 747

<212> PRT

<213> Homo Sapien

<400> 58

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Pro	Leu	Leu	Leu	Leu	Leu	Gly	Leu	Ala	Arg	Gly	Ala	Ala	Gly	Ala	
				20					25					30	
Pro	Gly	Pro	Asp	Gly	Leu	Asp	Val	Cys	Ala	Thr	Cys	His	Glu	His	
				35					40					45	
Ala	Thr	Cys	Gln	Gln	Arg	Glu	Gly	Lys	Lys	Ile	Cys	Ile	Cys	Asn	
				50					55					60	
Tyr	Gly	Phe	Val	Gly	Asn	Gly	Arg	Thr	Gln	Cys	Val	Asp	Lys	Asn	
				65					70					75	
Glu	Cys	Gln	Phe	Gly	Ala	Thr	Leu	Val	Cys	Gly	Asn	His	Thr	Ser	
				80					85					90	
Cys	His	Asn	Thr	Pro	Gly	Gly	Phe	Tyr	Cys	Ile	Cys	Leu	Glu	Gly	
				95					100					105	
Tyr	Arg	Ala	Thr	Asn	Asn	Asn	Lys	Thr	Phe	Ile	Pro	Asn	Asp	Gly	
				110					115					120	
Thr	Phe	Cys	Thr	Asp	Ile	Asp	Glu	Cys	Glu	Val	Ser	Gly	Leu	Cys	
				125					130					135	
Arg	His	Gly	Gly	Arg	Cys	Val	Asn	Thr	His	Gly	Ser	Phe	Glu	Cys	
				140					145					150	
Tyr	Cys	Met	Asp	Gly	Tyr	Leu	Pro	Arg	Asn	Gly	Pro	Glu	Pro	Phe	
				155					160					165	
His	Pro	Thr	Thr	Asp	Ala	Thr	Ser	Cys	Thr	Glu	Ile	Asp	Cys	Gly	
				170					175					180	
Thr	Pro	Pro	Glu	Val	Pro	Asp	Gly	Tyr	Ile	Ile	Gly	Asn	Tyr	Thr	
				185					190					195	
Ser	Ser	Leu	Gly	Ser	Gln	Val	Arg	Tyr	Ala	Cys	Arg	Glu	Gly	Phe	
				200					205					210	
Phe	Ser	Val	Pro	Glu	Asp	Thr	Val	Ser	Ser	Cys	Thr	Gly	Leu	Gly	
				215					220					225	
Thr	Trp	Glu	Ser	Pro	Lys	Leu	His	Cys	Gln	Glu	Ile	Asn	Cys	Gly	
				230					235					240	
Asn	Pro	Pro	Glu	Met	Arg	His	Ala	Ile	Leu	Val	Gly	Asn	His	Ser	
				245					250					255	
Ser	Arg	Leu	Gly	Gly	Val	Ala	Arg	Tyr	Val	Cys	Gln	Glu	Gly	Phe	
				260					265					270	

cctcttgaca gacatagcga gccac 25

<210> 61

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 61

cactcttgtc tgtggaacc acacatcttg ccacaactgt ggc 43

<210> 62

<211> 2015

<212> DNA

<213> Homo Sapien

<400> 62

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ctgctgggag gttgggggtct ctgggagctc tgcaggcccc agcaccgcga 150
gagcagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200
ctagcaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250
ctcttctagg gcctcaacct cagccggccc cattccagaa gcagagacca 300
ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350
acatctccca acttcatggt gctgatcgcc acctccgtgg agacatcagc 400
cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
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cagcgctct tccgacggcc cccatccagt catcaccccg tcatggtccc 750
cgggatctga tgtcactctc ctgctgaag ccctgggtgac tgtcacaaac 800
atcgagggtta ttaattgcag catcacagaa atagaaacaa caacttccag 850
catccctggg gcctcagaca tagatctcat cccacaggaa ggggtgaagg 900
cctcgccac ctccgatcca ccagctctgc ctgactccac tgaagcaaaa 950
ccacacatca ctgaggtcac agcctctgcc gagaccctgt ccacagccgg 1000

	50		55		60
Ser Ala Glu Thr	Ser Ser Arg Ala Ser Thr	Pro Ala Gly Pro Ile			
	65	70			75
Pro Glu Ala Glu Thr	Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg				
	80	85			90
Glu Thr Arg Ser Phe	Thr Lys Thr Ser Pro Asn Phe Met Val Leu				
	95	100			105
Ile Ala Thr Ser Val	Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu				
	110	115			120
Gly Ala Gly Met Thr	Thr Val Gln Thr Ile Thr Gly Ser Asp Pro				
	125	130			135
Glu Glu Ala Ile Phe	Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu				
	140	145			150
Glu Ala Lys Thr Leu	Thr Met Asp Ile Leu Thr Leu Ala His Thr				
	155	160			165
Ser Thr Glu Ala Lys	Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser				
	170	175			180
Asp Gly Pro His Pro	Val Ile Thr Pro Ser Arg Ala Ser Glu Ser				
	185	190			195
Ser Ala Ser Ser Asp	Gly Pro His Pro Val Ile Thr Pro Ser Arg				
	200	205			210
Ala Ser Glu Ser Ser	Ala Ser Ser Asp Gly Pro His Pro Val Ile				
	215	220			225
Thr Pro Ser Trp Ser	Pro Gly Ser Asp Val Thr Leu Leu Ala Glu				
	230	235			240
Ala Leu Val Thr Val	Thr Asn Ile Glu Val Ile Asn Cys Ser Ile				
	245	250			255
Thr Glu Ile Glu Thr	Thr Thr Ser Ser Ile Pro Gly Ala Ser Asp				
	260	265			270
Ile Asp Leu Ile Pro	Thr Glu Gly Val Lys Ala Ser Ser Thr Ser				
	275	280			285
Asp Pro Pro Ala Leu	Pro Asp Ser Thr Glu Ala Lys Pro His Ile				
	290	295			300
Thr Glu Val Thr Ala	Ser Ala Glu Thr Leu Ser Thr Ala Gly Thr				
	305	310			315
Thr Glu Ser Ala Ala	Pro His Ala Thr Val Gly Thr Pro Leu Pro				
	320	325			330
Thr Asn Ser Ala Thr	Glu Arg Glu Val Thr Ala Pro Gly Ala Thr				
	335	340			345

Thr Leu Ser Gly Ala Leu Val Thr Val Ser Arg Asn Pro Leu Glu
 350 355 360
 Glu Thr Ser Ala Leu Ser Val Glu Thr Pro Ser Tyr Val Lys Val
 365 370 375
 Ser Gly Ala Ala Pro Val Ser Ile Glu Ala Gly Ser Ala Val Gly
 380 385 390
 Lys Thr Thr Ser Phe Ala Gly Ser Ser Ala Ser Ser Tyr Ser Pro
 395 400 405
 Ser Glu Ala Ala Leu Lys Asn Phe Thr Pro Ser Glu Thr Pro Thr
 410 415 420
 Met Asp Ile Ala Thr Lys Gly Pro Phe Pro Thr Ser Arg Asp Pro
 425 430 435
 Leu Pro Ser Val Pro Pro Thr Thr Thr Asn Ser Ser Arg Gly Thr
 440 445 450
 Asn Ser Thr Leu Ala Lys Ile Thr Thr Ser Ala Lys Thr Thr Met
 455 460 465
 Lys Pro Gln Gln Pro Arg Pro Arg Leu Pro Gly Arg Gly Arg Pro
 470 475 480
 Gln Thr

<210> 64
 <211> 1252
 <212> DNA
 <213> Homo Sapien

<400> 64
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 cctgttaatt ctggccttgg gccaggcagt ccaatttcaa gaatatgtct 150
 ttctccaatt tctgggctta gataaggcgc cttcacccca gaagttccaa 200
 cctgtgcctt atatcttgaa gaaaattttc caggatcgcg aggcagcagc 250
 gaccactggg gtctcccag acttatgcta cgtaaaggag ctgggcgtcc 300
 gcgggaatgt acttcgcttt ctcccagacc aaggtttctt tctttaccca 350
 aagaaaattt cccaagcttc ctctgcctg cagaagctcc tctactttaa 400
 cctgtctgcc atcaaagaaa gggaacagtt gacattggcc cagctgggccc 450
 tggacttggg gcccaattct tactataacc tgggaccaga gctggaactg 500
 gctctgttcc tgggttcagga gcctcatgtg tggggccaga ccaccctaa 550

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gccaggtaaa atgtttgtgt tgcggtcagt cccatggcca caaggtgctg 600
ttcacttcaa cctgctggat gtagctaagg attggaatga caacccccgg 650
aaaaatttcg ggttattcct ggagatactg gtcaaagaag atagagactc 700
aggggtgaat tttcagcctg aagacacctg tgccagacta agatgctccc 750
ttcatgcttc cctgctgggtg gtgactctca accctgatca gtgccaccct 800
tctcggaaaa ggagagcagc catccctgtc cccaagcttt cttgtaagaa 850
cctctgccac cgtcaccagc tattcattaa cttccgggac ctgggttggc 900
acaagtggat cattgcccc aaggggttca tggcaaatta ctgccatgga 950
gagtgtccct tctcactgac catctctctc aacagctcca attatgcttt 1000
catgcaagcc ctgatgcatg ccgttgacct agagatcccc caggctgtgt 1050
gtatccccac caagctgtct cccatttcca tgctctacca ggacaataat 1100
gacaatgtca ttctacgaca ttatgaagac atggtagtcg atgaatgtgg 1150
gtgtgggtag gatgtcagaa atgggaatag aaggagtgtt cttagggtaa 1200
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tc 1252

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<210> 65

<211> 364

<212> PRT

<213> Homo Sapien

<400> 65

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Leu	Ala	Leu	Gly	Gln	Ala	Val	Gln	Phe	Gln	Glu	Tyr	Val	Phe	Leu
			20					25						30
Gln	Phe	Leu	Gly	Leu	Asp	Lys	Ala	Pro	Ser	Pro	Gln	Lys	Phe	Gln
			35					40						45
Pro	Val	Pro	Tyr	Ile	Leu	Lys	Lys	Ile	Phe	Gln	Asp	Arg	Glu	Ala
			50					55						60
Ala	Ala	Thr	Thr	Gly	Val	Ser	Arg	Asp	Leu	Cys	Tyr	Val	Lys	Glu
			65					70						75
Leu	Gly	Val	Arg	Gly	Asn	Val	Leu	Arg	Phe	Leu	Pro	Asp	Gln	Gly
			80					85						90
Phe	Phe	Leu	Tyr	Pro	Lys	Lys	Ile	Ser	Gln	Ala	Ser	Ser	Cys	Leu
			95					100						105
Gln	Lys	Leu	Leu	Tyr	Phe	Asn	Leu	Ser	Ala	Ile	Lys	Glu	Arg	Glu

110										115					120				
Gln	Leu	Thr	Leu	Ala	Gln	Leu	Gly	Leu	Asp	Leu	Gly	Pro	Asn	Ser					
				125					130					135					
Tyr	Tyr	Asn	Leu	Gly	Pro	Glu	Leu	Glu	Leu	Ala	Leu	Phe	Leu	Val					
				140					145					150					
Gln	Glu	Pro	His	Val	Trp	Gly	Gln	Thr	Thr	Pro	Lys	Pro	Gly	Lys					
				155					160					165					
Met	Phe	Val	Leu	Arg	Ser	Val	Pro	Trp	Pro	Gln	Gly	Ala	Val	His					
				170					175					180					
Phe	Asn	Leu	Leu	Asp	Val	Ala	Lys	Asp	Trp	Asn	Asp	Asn	Pro	Arg					
				185					190					195					
Lys	Asn	Phe	Gly	Leu	Phe	Leu	Glu	Ile	Leu	Val	Lys	Glu	Asp	Arg					
				200					205					210					
Asp	Ser	Gly	Val	Asn	Phe	Gln	Pro	Glu	Asp	Thr	Cys	Ala	Arg	Leu					
				215					220					225					
Arg	Cys	Ser	Leu	His	Ala	Ser	Leu	Leu	Val	Val	Thr	Leu	Asn	Pro					
				230					235					240					
Asp	Gln	Cys	His	Pro	Ser	Arg	Lys	Arg	Arg	Ala	Ala	Ile	Pro	Val					
				245					250					255					
Pro	Lys	Leu	Ser	Cys	Lys	Asn	Leu	Cys	His	Arg	His	Gln	Leu	Phe					
				260					265					270					
Ile	Asn	Phe	Arg	Asp	Leu	Gly	Trp	His	Lys	Trp	Ile	Ile	Ala	Pro					
				275					280					285					
Lys	Gly	Phe	Met	Ala	Asn	Tyr	Cys	His	Gly	Glu	Cys	Pro	Phe	Ser					
				290					295					300					
Leu	Thr	Ile	Ser	Leu	Asn	Ser	Ser	Asn	Tyr	Ala	Phe	Met	Gln	Ala					
				305					310					315					
Leu	Met	His	Ala	Val	Asp	Pro	Glu	Ile	Pro	Gln	Ala	Val	Cys	Ile					
				320					325					330					
Pro	Thr	Lys	Leu	Ser	Pro	Ile	Ser	Met	Leu	Tyr	Gln	Asp	Asn	Asn					
				335					340					345					
Asp	Asn	Val	Ile	Leu	Arg	His	Tyr	Glu	Asp	Met	Val	Val	Asp	Glu					
				350					355					360					

Cys Gly Cys Gly

<210> 66
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 66
 gtctgacagc cactccagag 20

 <210> 67
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 67
 tctccaattt ctgggcttag ataaggcgcc ttcaccccag aagttcc 47

 <210> 68
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 68
 gtcccagggt atagtaagaa ttgg 24

 <210> 69
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 69
 gtgttgcggt cagtcccatg 20

 <210> 70
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 70
 gctgtctccc atttccatgc 20

 <210> 71
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 71
cgactaccat gtcttcataa tgtc 24

<210> 72
<211> 2849
<212> DNA
<213> Homo Sapien

<400> 72
cactttctcc ctctcttctt ttactttcga gaaaccgcgc ttccgcttct 50
ggtcgcagag acctcggaga ccgcgccggg gagacggagg tgctgtgggt 100
gggggggacc tgtggctgct cgtaccgccccc cccaccctcc tcttctgcac 150
tgccgtcctc cggaagacct tttcccctgc tctgtttcct tcaccgagtc 200
tgtgcatcgc cccggacctg gccgggagga ggcttggccg gcgggagatg 250
ctctaggggc ggcgccggag gagcgcccg cgggacggag ggcccggcag 300
gaagatgggc tcccgtggac agggactctt gctggcgtag tgccgtctcc 350
ttgcctttgc ctctggcctg gtccctgagtc gtgtgccccca tgtccagggg 400
gaacagcagg agtgggaggg gactgaggag ctgccgtcgc ctccggacca 450
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caggctcagc agggggccagg ggccacactg gacccaaagg gcagaagggc 700
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tgaccccacc gcctcttccc cgatccctgg actccgactc cctggctttg 1250

tccctaagtc cctctcttta aagaacttct gcgggtcaga ctctgaagcc 2750
gagttgctgt gggcgtgccc ggaagcagag cgccacactc gctgcttaag 2800
ctccccagc tctttccaga aaacattaaa ctcagaattg tgttttcaa 2849

<210> 73
<211> 281
<212> PRT
<213> Homo Sapien

<400> 73
Met Gly Ser Arg Gly Gln Gly Leu Leu Leu Ala Tyr Cys Leu Leu
1 5 10 15
Leu Ala Phe Ala Ser Gly Leu Val Leu Ser Arg Val Pro His Val
20 25 30
Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser
35 40 45
Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr
50 55 60
Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg
65 70 75
Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro
80 85 90
Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly
95 100 105
Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly
110 115 120
Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser Met Gly
125 130 135
Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser Val
140 145 150
Gly Arg Lys Lys Pro Met His Ser Asn His Tyr Tyr Gln Thr Val
155 160 165
Ile Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met
170 175 180
Phe Thr Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe
185 190 195
Ser Leu Asn Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His
200 205 210
Ile Met Lys Asn Glu Glu Glu Val Val Ile Leu Phe Ala Gln Val
215 220 225
Gly Asp Arg Ser Ile Met Gln Ser Gln Ser Leu Met Leu Glu Leu

230	235	240
Arg Glu Gln Asp Gln Val Trp Val Arg	Leu Tyr Lys Gly Glu Arg	
245	250	255
Glu Asn Ala Ile Phe Ser Glu Glu Leu	Asp Thr Tyr Ile Thr Phe	
260	265	270
Ser Gly Tyr Leu Val Lys His Ala Thr	Glu Pro	
275	280	

<210> 74
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 74
 tacaggccca gtcaggacca gggg 24

<210> 75
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 75
 ctgaagaagt agaggccggg cacg 24

<210> 76
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 76
 cccggtgctt gcgctgctgt gaccccggtta cctccatgta cccgg 45

<210> 77
 <211> 1042
 <212> DNA
 <213> Homo Sapien

<400> 77
 gaattcggca cgagggaaga agagaaagaa aatctccggg gctgctggga 50
 gcatataaag aagccctgtg gccttgctgg ttttaccatc cagaccagag 100
 tcaggccaca gacggacatg gctgctcaag gctgggtccat gtcctgctg 150
 gctgtcctta acctaggcat cttcgctccgt cctgtgaca ctcaagagct 200

acgatgtctg tgtattcagg aacactctga attcattcct ctcaaactca 250
 ttaaaaatat aatgggtgata ttcgagacca tttactgcaa cagaaaggaa 300
 gtgatagcag tccccaaaaa tgggagtatg atttgtttgg atcctgatgc 350
 tccatgggtg aaggctactg ttggcccaat tactaacagg ttcctacctg 400
 aggacctcaa acaaaaggaa tttccaccgg caatgaagct tctgtatagt 450
 gttgagcatg aaaagcctct atatctttca tttgggagac ctgagaacaa 500
 gagaatattt cccctttccaa ttcgggagac ctctagacac tttgctgatt 550
 tagctcacia cagtgatagg aattttctac gggactccag tgaagtcagc 600
 ttgacaggca gtgatgccta aaagccactc atgaggcaaa gagtttcaag 650
 gaagctctcc tectggagtt ttggcgttct cattcttata ctctattccc 700
 gcgttagtct ggtgtatgga tctatgagct ctcttttaat attttattat 750
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 ccccatcccc atttcttgat attacatata atggcatcat ataccctttt 850
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 tatcccactc cactatgggc tgttacagag tgcactcggg ttagagcaa 950
 ggctccttgt cttcagtgcc ccagggtgaa atacttcttt gaaaaatttt 1000
 cattcatcag aaaatctgaa ataaaaatat gtcttaattg ag 1042

<210> 78
 <211> 167
 <212> PRT
 <213> Homo Sapien

<400> 78
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 Leu Gly Ile Phe Val Arg Pro Cys Asp Thr Gln Glu Leu Arg Cys
 20 25 30
 Leu Cys Ile Gln Glu His Ser Glu Phe Ile Pro Leu Lys Leu Ile
 35 40 45
 Lys Asn Ile Met Val Ile Phe Glu Thr Ile Tyr Cys Asn Arg Lys
 50 55 60
 Glu Val Ile Ala Val Pro Lys Asn Gly Ser Met Ile Cys Leu Asp
 65 70 75
 Pro Asp Ala Pro Trp Val Lys Ala Thr Val Gly Pro Ile Thr Asn
 80 85 90

Arg	Phe	Leu	Pro	Glu	Asp	Leu	Lys	Gln	Lys	Glu	Phe	Pro	Pro	Ala
				95					100					105
Met	Lys	Leu	Leu	Tyr	Ser	Val	Glu	His	Glu	Lys	Pro	Leu	Tyr	Leu
				110					115					120
Ser	Phe	Gly	Arg	Pro	Glu	Asn	Lys	Arg	Ile	Phe	Pro	Phe	Pro	Ile
				125					130					135
Arg	Glu	Thr	Ser	Arg	His	Phe	Ala	Asp	Leu	Ala	His	Asn	Ser	Asp
				140					145					150
Arg	Asn	Phe	Leu	Arg	Asp	Ser	Ser	Glu	Val	Ser	Leu	Thr	Gly	Ser
				155					160					165

Asp Ala

<210> 79
 <211> 798
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 794
 <223> unknown base

<400> 79
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 tttggcatcc ccaggaccca aggcagtgat ggaggggctc aggactgttg 100
 cctcaagtac agccaaagga agattcccgc caaggttgct cgcagctacc 150
 ggaagcagga accaagctta ggctgctcca tcccagctat cctgttcttg 200
 ccccgcaagc gctctcaggc agagctatgt gcagacccaa aggagctctg 250
 ggtgcagcag ctgatgcagc atctggacaa gacaccatcc ccacagaaac 300
 cagcccaggg ctgcaggaag gacagggggg cctccaagac tggcaagaaa 350
 ggaaagggct ccaaaggctg caagaggact gagcgggtcac agaccctaa 400
 agggccatag cccagtgagc agcctggagc cctggagacc ccaccagcct 450
 caccagcgct tgaagcctga acccaagatg caagaaggag gctatgctca 500
 ggggaccttg agcagccacc ccattgctggc cttgccacac tctttctcct 550
 gctttaacca ccccatctgc attcccagct ctaccctgca tggctgagct 600
 gccacagca ggccaggtcc agagagaccg aggagggaga gtctcccagg 650
 gagcatgaga ggaggcagca ggactgtccc cttgaaggag aatcatcagg 700
 accctggacc tgatacggtc cccaggtaca cccacacctt tccttgtaaa 750

tatgatttat acctaactga ataaaaagct gttctgtctt ccnccca 798

<210> 80

<211> 134

<212> PRT

<213> Homo Sapien

<400> 80

Met Ala Gln Ser Leu Ala Leu Ser Leu Leu Ile Leu Val Leu Ala
1 5 10 15

Phe Gly Ile Pro Arg Thr Gln Gly Ser Asp Gly Gly Ala Gln Asp
20 25 30

Cys Cys Leu Lys Tyr Ser Gln Arg Lys Ile Pro Ala Lys Val Val
35 40 45

Arg Ser Tyr Arg Lys Gln Glu Pro Ser Leu Gly Cys Ser Ile Pro
50 55 60

Ala Ile Leu Phe Leu Pro Arg Lys Arg Ser Gln Ala Glu Leu Cys
65 70 75

Ala Asp Pro Lys Glu Leu Trp Val Gln Gln Leu Met Gln His Leu
80 85 90

Asp Lys Thr Pro Ser Pro Gln Lys Pro Ala Gln Gly Cys Arg Lys
95 100 105

Asp Arg Gly Ala Ser Lys Thr Gly Lys Lys Gly Lys Gly Ser Lys
110 115 120

Gly Cys Lys Arg Thr Glu Arg Ser Gln Thr Pro Lys Gly Pro
125 130

<210> 81

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 81

agacatggct cagtcactgg 20

<210> 82

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 82

gacccctaaa gggccatag 19

<210> 83

<211> 924
 <212> DNA
 <213> Homo Sapien

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 cgggtctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150
 gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaaata 200
 gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
 tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacaggggtg 300
 tcaaggatca tcaggagcca aacccccaaa tcttgagaaa aatcagcagc 350
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 tccatgacaa ctatgatcag ctggaggtcc acgctgctgc cattaaatcc 500
 ctggggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
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 cccccctgt gcggtttact gtgggagaca gccaccttg aaggggaagg 650
 agatggggaa ggcccccttg agctgaaagt cccactggct ggcctcaggc 700
 tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtatttgtaa 750
 taaactctat ctgctgaaag ggctgcagg ccatcctggg agtaaagggc 800
 tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
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 ataaattcca tattttacct atga 924

<210> 84
 <211> 177
 <212> PRT
 <213> Homo Sapien

<400> 84
 Met Lys Leu Gln Cys Val Ser Leu Trp Leu Leu Gly Thr Ile Leu
 1 5 10 15
 Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile
 20 25 30
 Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys
 35 40 45

Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu
50 55 60

Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys
65 70 75

Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe
80 85 90

Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser
95 100 105

Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln
110 115 120

Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn
125 130 135

Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His
140 145 150

Ala Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala
155 160 165

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 85
<211> 2137
<212> DNA
<213> Homo Sapien

<400> 85
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tgggcgggggt caccctggct gggacaagaa gccgcccgcct gcctgcccgg 150
gcccgggggag ggggctgggg ctggggccgg aggcgggggtg tgagtgggtg 200
tgtgccccggg gcggaggctt gatgcaatcc cgataagaaa tgctcgggtg 250
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tgggccggcct ctggctggcc gtggccgggc gcccctcgc cttctcggac 550
gcggggcccc acgtgcacta cggctggggc gaccccatcc gcctgcggca 600
cctgtacacc tccggccccc acgggctctc cagctgcttc ctgcgcatcc 650

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 cagcgtgcgg tacctctgca tgggcgccga cggcaagatg caggggctgc 800
 ttcagtactc ggaggaagac tgtgctttcg aggaggagat ccgcccagat 850
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 ggttttccaa catgatattt atgagtaatt tattttgata tgtacatctc 2050
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gaggtttgtt ttgtatatta aaatggagtt tgtttgt 2137

<210> 86

<211> 216

<212> PRT

<213> Homo Sapien

<400> 86

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Gly	Pro	His	Val	His	Tyr	Gly	Trp	Gly	Asp	Pro	Ile	Arg	Leu	Arg	35	40	45	
His	Leu	Tyr	Thr	Ser	Gly	Pro	His	Gly	Leu	Ser	Ser	Cys	Phe	Leu	50	55	60	
Arg	Ile	Arg	Ala	Asp	Gly	Val	Val	Asp	Cys	Ala	Arg	Gly	Gln	Ser	65	70	75	
Ala	His	Ser	Leu	Leu	Glu	Ile	Lys	Ala	Val	Ala	Leu	Arg	Thr	Val	80	85	90	
Ala	Ile	Lys	Gly	Val	His	Ser	Val	Arg	Tyr	Leu	Cys	Met	Gly	Ala	95	100	105	
Asp	Gly	Lys	Met	Gln	Gly	Leu	Leu	Gln	Tyr	Ser	Glu	Glu	Asp	Cys	110	115	120	
Ala	Phe	Glu	Glu	Glu	Ile	Arg	Pro	Asp	Gly	Tyr	Asn	Val	Tyr	Arg	125	130	135	
Ser	Glu	Lys	His	Arg	Leu	Pro	Val	Ser	Leu	Ser	Ser	Ala	Lys	Gln	140	145	150	
Arg	Gln	Leu	Tyr	Lys	Asn	Arg	Gly	Phe	Leu	Pro	Leu	Ser	His	Phe	155	160	165	
Leu	Pro	Met	Leu	Pro	Met	Val	Pro	Glu	Glu	Pro	Glu	Asp	Leu	Arg	170	175	180	
Gly	His	Leu	Glu	Ser	Asp	Met	Phe	Ser	Ser	Pro	Leu	Glu	Thr	Asp	185	190	195	
Ser	Met	Asp	Pro	Phe	Gly	Leu	Val	Thr	Gly	Leu	Glu	Ala	Val	Arg	200	205	210	
Ser	Pro	Ser	Phe	Glu	Lys	215												

<210> 87

<211> 26

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 87
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<210> 88
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 88
gcctcccggt ctccctgagc agtgccaaac agcggcagtg ta 42

<210> 89
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 89
ccagtccggt gacaagccca aa 22

<210> 90
<211> 1857
<212> DNA
<213> Homo Sapien

<400> 90
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gatggggaca aaggcgcaag tcgagaggaa actggtgtgc ctcttcatat 100
tggcgatcct gttgtgctcc ctggcattgg gcagtgttac agtgcactct 150
tctgaacctg aagtcagaat tcctgagaat aatcctgtga agttgtcctg 200
tgctactcgc ggcttttctt ctccccgtgt ggagtggaag tttgaccaag 250
gagacaccac cagactcgtt tgctataata acaagatcac agcttcctat 300
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 agctgctcag gagcctggca acaagagcaa aactccagct caaaaaaaaaa 1850
 aaaaaa 1857

<210> 91

<211> 299

<212> PRT

<213> Homo Sapien

<400> 91

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Ile	Leu	Ala	Ile	Leu 20	Leu	Cys	Ser	Leu	Ala 25	Leu	Gly	Ser	Val	Thr 30
Val	His	Ser	Ser	Glu 35	Pro	Glu	Val	Arg	Ile 40	Pro	Glu	Asn	Asn	Pro 45
Val	Lys	Leu	Ser	Cys 50	Ala	Tyr	Ser	Gly	Phe 55	Ser	Ser	Pro	Arg	Val 60
Glu	Trp	Lys	Phe	Asp 65	Gln	Gly	Asp	Thr	Thr 70	Arg	Leu	Val	Cys	Tyr 75
Asn	Asn	Lys	Ile	Thr 80	Ala	Ser	Tyr	Glu	Asp 85	Arg	Val	Thr	Phe	Leu 90
Pro	Thr	Gly	Ile	Thr 95	Phe	Lys	Ser	Val	Thr 100	Arg	Glu	Asp	Thr	Gly 105
Thr	Tyr	Thr	Cys	Met 110	Val	Ser	Glu	Glu	Gly 115	Gly	Asn	Ser	Tyr	Gly 120
Glu	Val	Lys	Val	Lys 125	Leu	Ile	Val	Leu	Val 130	Pro	Pro	Ser	Lys	Pro 135
Thr	Val	Asn	Ile	Pro 140	Ser	Ser	Ala	Thr	Ile 145	Gly	Asn	Arg	Ala	Val 150
Leu	Thr	Cys	Ser	Glu 155	Gln	Asp	Gly	Ser	Pro 160	Pro	Ser	Glu	Tyr	Thr 165
Trp	Phe	Lys	Asp	Gly 170	Ile	Val	Met	Pro	Thr 175	Asn	Pro	Lys	Ser	Thr 180
Arg	Ala	Phe	Ser	Asn 185	Ser	Ser	Tyr	Val	Leu 190	Asn	Pro	Thr	Thr	Gly 195
Glu	Leu	Val	Phe	Asp 200	Pro	Leu	Ser	Ala	Ser 205	Asp	Thr	Gly	Glu	Tyr 210
Ser	Cys	Glu	Ala	Arg 215	Asn	Gly	Tyr	Gly	Thr 220	Pro	Met	Thr	Ser	Asn 225
Ala	Val	Arg	Met	Glu 230	Ala	Val	Glu	Arg	Asn 235	Val	Gly	Val	Ile	Val 240
Ala	Ala	Val	Leu	Val 245	Thr	Leu	Ile	Leu	Leu 250	Gly	Ile	Leu	Val	Phe 255
Gly	Ile	Trp	Phe	Ala 260	Tyr	Ser	Arg	Gly	His 265	Phe	Asp	Arg	Thr	Lys 270
Lys	Gly	Thr	Ser	Ser 275	Lys	Lys	Val	Ile	Tyr 280	Ser	Gln	Pro	Ser	Ala 285
Arg	Ser	Glu	Gly	Glu	Phe	Lys	Gln	Thr	Ser	Ser	Phe	Leu	Val	

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcgcgagct gtgttctgtt tccc 24

<210> 93
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
tgatcgcat ggggacaaaag gcgcaagctc gagaggaaac tgttgtgcct 50

<210> 94
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 94
acacctgggtt caaagatggg 20

<210> 95
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 95
taggaagagt tgctgaaggc acgg 24

<210> 96
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 96
ttgccttact caggtgctac 20

<210> 97

<211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 97
 actcagcagt ggtaggaaag 20

<210> 98
 <211> 1200
 <212> DNA
 <213> Homo Sapien

<400> 98
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 acctcactct gtgcttacag ctgctgattc tctgctgtca aactcagtac 100
 gtgagggacc agggcgccat gaccgaccag ctgagcaggc ggcagatccg 150
 cgagtaccaa ctctacagca ggaccagtgg caagcacgtg caggtcaccg 200
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<210> 99
<211> 205
<212> PRT
<213> Homo Sapien

<400> 99
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20 25 30
Ala Met Thr Asp Gln Leu Ser Arg Arg Gln Ile Arg Glu Tyr Gln
35 40 45
Leu Tyr Ser Arg Thr Ser Gly Lys His Val Gln Val Thr Gly Arg
50 55 60
Arg Ile Ser Ala Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu
65 70 75
Ile Val Glu Thr Asp Thr Phe Gly Ser Arg Val Arg Ile Lys Gly
80 85 90
Ala Glu Ser Glu Lys Tyr Ile Cys Met Asn Lys Arg Gly Lys Leu
95 100 105
Ile Gly Lys Pro Ser Gly Lys Ser Lys Asp Cys Val Phe Thr Glu
110 115 120
Ile Val Leu Glu Asn Asn Tyr Thr Ala Phe Gln Asn Ala Arg His
125 130 135
Glu Gly Trp Phe Met Ala Phe Thr Arg Gln Gly Arg Pro Arg Gln
140 145 150
Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu Ala His Phe Ile Lys
155 160 165
Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn His Ala Glu Lys
170 175 180
Gln Lys Gln Phe Glu Phe Val Gly Ser Ala Pro Thr Arg Arg Thr
185 190 195
Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr
200 205

<210> 100
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 100
cagtacgtga gggaccaggg cgccatga 28

<210> 101
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 101
ccggtgacct gcacgtgctt gcca 24

<210> 102
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<220>
<221> unsure
<222> 21
<223> unknown base

<400> 102
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<210> 103
<211> 1679
<212> DNA
<213> Homo Sapien

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aaaaatgcac aattctatct cttgggcaat cttcacgggg ctggctgctc 200
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aaagctatgg acaacgtgac ggtccggcag ggggagagcg ccaccctcag 300
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aattcaatca gtccatagag acgaacagaa tgagacctc cggcccaagc 1600
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aaacgtgaaa taaaaagagc aaaaaaaaaa 1679

<210> 104
<211> 344
<212> PRT
<213> Homo Sapien

<400> 104
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Val Ser Glu Val Ser Asn Gly Thr Ser Arg Arg Ala Gly Cys Val
 320 325 330

Trp Leu Leu Pro Leu Leu Val Leu His Leu Leu Leu Lys Phe
 335 340

<210> 105
 <211> 1734
 <212> DNA
 <213> Homo Sapien

<400> 105
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 agacactctg gagagagagg gggctgggca gagatgaagt tccagggggcc 200
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				140					145					150
Phe	Gly	Ser	Gln	Gly 155	Gly	Leu	Gly	Gly	Gln 160	Gly	Gln	Gly	Asn	Pro 165
Gly	Gly	Leu	Gly	Thr 170	Pro	Trp	Val	His	Gly 175	Tyr	Pro	Gly	Asn	Ser 180
Ala	Gly	Ser	Phe	Gly 185	Met	Asn	Pro	Gln	Gly 190	Ala	Pro	Trp	Gly	Gln 195
Gly	Gly	Asn	Gly	Gly 200	Pro	Pro	Asn	Phe	Gly 205	Thr	Asn	Thr	Gln	Gly 210
Ala	Val	Ala	Gln	Pro 215	Gly	Tyr	Gly	Ser	Val 220	Arg	Ala	Ser	Asn	Gln 225
Asn	Glu	Gly	Cys	Thr 230	Asn	Pro	Pro	Pro	Ser 235	Gly	Ser	Gly	Gly	Gly 240
Ser	Ser	Asn	Ser	Gly 245	Gly	Gly	Ser	Gly	Ser 250	Gln	Ser	Gly	Ser	Ser 255
Gly	Ser	Gly	Ser	Asn 260	Gly	Asp	Asn	Asn	Asn 265	Gly	Ser	Ser	Ser	Gly 270
Gly	Ser	Ser	Ser	Gly 275	Ser	Ser	Ser	Gly	Ser 280	Ser	Ser	Gly	Gly	Ser 285
Ser	Gly	Gly	Ser	Ser 290	Gly	Gly	Ser	Ser	Gly 295	Asn	Ser	Gly	Gly	Ser 300
Arg	Gly	Asp	Ser	Gly 305	Ser	Glu	Ser	Ser	Trp 310	Gly	Ser	Ser	Thr	Gly 315
Ser	Ser	Ser	Gly	Asn 320	His	Gly	Gly	Ser	Gly 325	Gly	Gly	Asn	Gly	His 330
Lys	Pro	Gly	Cys	Glu 335	Lys	Pro	Gly	Asn	Glu 340	Ala	Arg	Gly	Ser	Gly 345
Glu	Ser	Gly	Ile	Gln 350	Gly	Phe	Arg	Gly	Gln 355	Gly	Val	Ser	Ser	Asn 360
Met	Arg	Glu	Ile	Ser 365	Lys	Glu	Gly	Asn	Arg 370	Leu	Leu	Gly	Gly	Ser 375
Gly	Asp	Asn	Tyr	Arg 380	Gly	Gln	Gly	Ser	Ser 385	Trp	Gly	Ser	Gly	Gly 390
Gly	Asp	Ala	Val	Gly 395	Gly	Val	Asn	Thr	Val 400	Asn	Ser	Glu	Thr	Ser 405
Pro	Gly	Met	Phe	Asn 410	Phe	Asp	Thr	Phe	Trp 415	Lys	Asn	Phe	Lys	Ser 420
Lys	Leu	Gly	Phe	Ile 425	Asn	Trp	Asp	Ala	Ile 430	Asn	Lys	Asp	Gln	Arg 435

Ser Ser Arg Ile Pro
440

<210> 107
<211> 918
<212> DNA
<213> Homo Sapien

<400> 107
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agcaatggca atgggggtcc ccagagtcac tctgctctgc ctctttgggg 100
ctgcgctctg cctgacaggg tcccaagccc tgcagtgcta cagctttgag 150
cacacctact ttggcccctt tgacctcagg gccatgaagc tgcccagcat 200
ctcctgtcct catgagtgtt ttgaggctat cctgtctctg gacaccgggt 250
atcgcgcgcc ggtgaccctg gtgcggaagg gctgctggac cgggcctcct 300
gcggggccaga cgcaatcgaa cccggacgcg ctgccgccag actactcggg 350
ggtgcgcggc tgcacaactg acaaatgcaa cgcccacctc atgactcatg 400
acgccctccc caacctgagc caagcacccg acccgccgac gctcagcggc 450
gccgagtgtt acgcctgtat cgggggtccac caggatgact gcgctatcgg 500
caggccccga cgagtccagt gtcaccagga ccagaccgcc tgcttccagg 550
gcagtggcag aatgacagtt ggcaatttct cagtccctgt gtacatcaga 600
acctgccacc ggccctcctg caccaccgag ggcaccacca gccctcggac 650
agccatcgac ctccagggtt cctgctgtga ggggtacctc tgcaacagga 700
aatccatgac ccagcccttc accagtgtt cagccaccac ccctccccga 750
gcactacagg tcctggccct gtcctccca gtctcctgc tgggtggggct 800
ctcagcatag accgcccctc caggatgctg gggacagggc tcacacacct 850
cattcttgtt gttcagccc ctatcacata gctcactgga aaatgatgtt 900
aaagtaagaa ttgcaaaa 918

<210> 108
<211> 251
<212> PRT
<213> Homo Sapien

<400> 108
Met Ala Met Gly Val Pro Arg Val Ile Leu Leu Cys Leu Phe Gly
1 5 10 15
Ala Ala Leu Cys Leu Thr Gly Ser Gln Ala Leu Gln Cys Tyr Ser
20 25 30

Phe	Glu	His	Thr	Tyr	Phe	Gly	Pro	Phe	Asp	Leu	Arg	Ala	Met	Lys	35	40	45
Leu	Pro	Ser	Ile	Ser	Cys	Pro	His	Glu	Cys	Phe	Glu	Ala	Ile	Leu	50	55	60
Ser	Leu	Asp	Thr	Gly	Tyr	Arg	Ala	Pro	Val	Thr	Leu	Val	Arg	Lys	65	70	75
Gly	Cys	Trp	Thr	Gly	Pro	Pro	Ala	Gly	Gln	Thr	Gln	Ser	Asn	Pro	80	85	90
Asp	Ala	Leu	Pro	Pro	Asp	Tyr	Ser	Val	Val	Arg	Gly	Cys	Thr	Thr	95	100	105
Asp	Lys	Cys	Asn	Ala	His	Leu	Met	Thr	His	Asp	Ala	Leu	Pro	Asn	110	115	120
Leu	Ser	Gln	Ala	Pro	Asp	Pro	Pro	Thr	Leu	Ser	Gly	Ala	Glu	Cys	125	130	135
Tyr	Ala	Cys	Ile	Gly	Val	His	Gln	Asp	Asp	Cys	Ala	Ile	Gly	Arg	140	145	150
Ser	Arg	Arg	Val	Gln	Cys	His	Gln	Asp	Gln	Thr	Ala	Cys	Phe	Gln	155	160	165
Gly	Ser	Gly	Arg	Met	Thr	Val	Gly	Asn	Phe	Ser	Val	Pro	Val	Tyr	170	175	180
Ile	Arg	Thr	Cys	His	Arg	Pro	Ser	Cys	Thr	Thr	Glu	Gly	Thr	Thr	185	190	195
Ser	Pro	Trp	Thr	Ala	Ile	Asp	Leu	Gln	Gly	Ser	Cys	Cys	Glu	Gly	200	205	210
Tyr	Leu	Cys	Asn	Arg	Lys	Ser	Met	Thr	Gln	Pro	Phe	Thr	Ser	Ala	215	220	225
Ser	Ala	Thr	Thr	Pro	Pro	Arg	Ala	Leu	Gln	Val	Leu	Ala	Leu	Leu	230	235	240
Leu	Pro	Val	Leu	Leu	Leu	Val	Gly	Leu	Ser	Ala					245	250	

<210> 109

<211> 1813

<212> DNA

<213> Homo Sapien

<400> 109

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cgcgacgacct cggcacctgc aggtccgtgc gtcccgcggc tggcgccct 100

gactccgtcc cggccaggga gggccatgat ttccctcccg gggccctgg 150

tgaccaactt gctgcggttt ttgttctgg ggctgagtgc cctcgcgccc 200

ttggctccca ctccagctcc ctgtattgat ataacctgtc aggctggctt 1700
 ggttagggttt tactggggca gaggataggg aatctcttat taaaactaac 1750
 atgaaatatg tgttggttttc atttgcaaatt ttaaataaag atacataatg 1800
 tttgtatgaa aaa 1813

<210> 110
 <211> 390
 <212> PRT
 <213> Homo Sapien

<400> 110
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 1 5 10 15
 Leu Phe Leu Gly Leu Ser Ala Leu Ala Pro Pro Ser Arg Ala Gln
 20 25 30
 Leu Gln Leu His Leu Pro Ala Asn Arg Leu Gln Ala Val Glu Gly
 35 40 45
 Gly Glu Val Val Leu Pro Ala Trp Tyr Thr Leu His Gly Glu Val
 50 55 60
 Ser Ser Ser Gln Pro Trp Glu Val Pro Phe Val Met Trp Phe Phe
 65 70 75
 Lys Gln Lys Glu Lys Glu Asp Gln Val Leu Ser Tyr Ile Asn Gly
 80 85 90
 Val Thr Thr Ser Lys Pro Gly Val Ser Leu Val Tyr Ser Met Pro
 95 100 105
 Ser Arg Asn Leu Ser Leu Arg Leu Glu Gly Leu Gln Glu Lys Asp
 110 115 120
 Ser Gly Pro Tyr Ser Cys Ser Val Asn Val Gln Asp Lys Gln Gly
 125 130 135
 Lys Ser Arg Gly His Ser Ile Lys Thr Leu Glu Leu Asn Val Leu
 140 145 150
 Val Pro Pro Ala Pro Pro Ser Cys Arg Leu Gln Gly Val Pro His
 155 160 165
 Val Gly Ala Asn Val Thr Leu Ser Cys Gln Ser Pro Arg Ser Lys
 170 175 180
 Pro Ala Val Gln Tyr Gln Trp Asp Arg Gln Leu Pro Ser Phe Gln
 185 190 195
 Thr Phe Phe Ala Pro Ala Leu Asp Val Ile Arg Gly Ser Leu Ser
 200 205 210
 Leu Thr Asn Leu Ser Ser Ser Met Ala Gly Val Tyr Val Cys Lys
 215 220 225

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 113

ggccacagca tcaaacctt agaactcaat gtactgggtc ctccagctcc 50

<210> 114

<211> 2479

<212> DNA

<213> Homo Sapien

<400> 114

acttgccatc acctgttgcc agtgtggaaa aattctccct gttgaatttt 50

ttgcacatgg aggacagcag caaagagggc aacacaggct gataagacca 100

gagacagcag ggagattatt ttaccatacg ccctcaggac gttccctcta 150

gctggagttc tggacttcaa cagaaccca tccagtcatt ttgattttgc 200

tgtttatttt ttttttcttt ttctttttcc caccacattg tattttattt 250

cogtacttca gaaatgggcc tacagaccac aaagtggccc agccatgggg 300

cttttttctt gaagtcttgg cttatcattt ccctggggct ctactcacag 350

gtgtccaaac tcctggcctg ccctagtgtg tgccgctgcg acaggaactt 400

tgtctactgt aatgagcgaa gcttgacctc agtgccctctt gggatcccgg 450

agggcgtaac cgtactctac ctccacaaca accaaattaa taatgctgga 500

tttctgcag aactgcacaa tgtacagtcg gtgcacacgg tctacctgta 550

tggcaaccaa ctggacgaat tccccatgaa ccttcccaag aatgtcagag 600

ttctccattt gcaggaaaac aatattcaga ccatttcacg ggctgctctt 650

gccagctct tgaagcttga agagctgcac ctggatgaca actccatata 700

cacagtgggg gtggaagacg gggccttcog ggaggctatt agcctcaaata 750

tgttggtttt gtctaagaat cacctgagca gtgtgcctgt tgggcttcct 800

gtggacttgc aagagctgag agtggatgaa aatcgaattg ctgtcatata 850

cgacatggcc ttccagaatc tcacgagctt ggagcgtctt attgtggacg 900

ggaacctcct gaccaacaag ggtatcgccg agggcacctt cagccatctc 950

accaagctca aggaattttc aattgtacgt aattcgctgt cccacctctc 1000

tcccgatctc ccaggtagcg atctgatcag gctctatttg caggacaacc 1050

agataaacca cattcctttg acagccttct caaatctgcg taagctggaa 1100

cggctggata tatccaacaa ccaactgcgg atgctgactc aaggggtttt 1150
 tgataatctc tccaacctga agcagctcac tgctcggaat aacccttggt 1200
 tttgtgactg cagtattaaa tgggtcacag aatgggtcaa atatatccct 1250
 tcattctctca acgtgcgggg tttcatgtgc caaggtcctg aacaagtccg 1300
 ggggatggcc gtcaggggaat taaatatgaa tcttttgtcc tgtcccacca 1350
 cgacccccgg cctgcctctc ttcaccccag cccaagtac agcttctccg 1400
 accactcage ctcccaccct ctctattcca aaccctagca gaagctacac 1450
 gctccaact cctaccacat cgaaacttcc cagattcct gactgggatg 1500
 gcagagaaag agtgacccca cctatttctg aacggatcca gctctctatc 1550
 cattttgtga atgatacttc cattcaagtc agctggctct ctctcttcac 1600
 cgtgatggca tacaaactca catgggtgaa aatggggccac agtttagtag 1650
 ggggcatcgt tcaggagcgc atagtcagcg gtgagaagca acacctgagc 1700
 ctggttaact tagagccccg atccacctat cggatttggt tagtgccact 1750
 ggatgctttt aactaccgcg cggtagaaga caccatttgt tcagaggcca 1800
 ccacccatgc ctctatctg aacaacggca gcaacacagc gtccagccat 1850
 gagcagacga cgtcccacag catgggctcc ccttttctgc tggcgggctt 1900
 gatcgggggc gcggtgatat ttgtgctggt ggtcttgctc agcgtctttt 1950
 gctggcatat gcacaaaaag gggcgctaca cctcccagaa gtggaaatac 2000
 aaccggggcc ggcggaaaga tgattattgc gaggcaggca ccaagaagga 2050
 caactccatc ctggagatga cagaaaccag ttttcagatc gtctccttaa 2100
 ataacgatca actccttaaa ggagatttca gactgcagcc catttacacc 2150
 ccaaattggg gcattaatta cacagactgc catatcccca acaacatgcg 2200
 atactgcaac agcagcgtgc cagacctgga gcaactgcat acgtgacagc 2250
 cagaggccca gcgttatcaa ggcggacaat tagactcttg agaacacact 2300
 cgtgtgtgca cataaagaca cgcagattac atttgataaa tgttacacag 2350
 atgcatttgt gcatttgaat actctgtaat ttatacggtg tactatataa 2400
 tgggatttaa aaaaagtgc atcttttcta tttcaagtta attacaaaca 2450
 gttttgtaac tctttgcttt ttaaattctt 2479

<210> 115
 <211> 660

<212> PRT
 <213> Homo Sapien

<400> 115

Met	Gly	Leu	Gln	Thr	Thr	Lys	Trp	Pro	Ser	His	Gly	Ala	Phe	Phe	1	5	10	15
Leu	Lys	Ser	Trp	Leu	Ile	Ile	Ser	Leu	Gly	Leu	Tyr	Ser	Gln	Val	20	25	30	
Ser	Lys	Leu	Leu	Ala	Cys	Pro	Ser	Val	Cys	Arg	Cys	Asp	Arg	Asn	35	40	45	
Phe	Val	Tyr	Cys	Asn	Glu	Arg	Ser	Leu	Thr	Ser	Val	Pro	Leu	Gly	50	55	60	
Ile	Pro	Glu	Gly	Val	Thr	Val	Leu	Tyr	Leu	His	Asn	Asn	Gln	Ile	65	70	75	
Asn	Asn	Ala	Gly	Phe	Pro	Ala	Glu	Leu	His	Asn	Val	Gln	Ser	Val	80	85	90	
His	Thr	Val	Tyr	Leu	Tyr	Gly	Asn	Gln	Leu	Asp	Glu	Phe	Pro	Met	95	100	105	
Asn	Leu	Pro	Lys	Asn	Val	Arg	Val	Leu	His	Leu	Gln	Glu	Asn	Asn	110	115	120	
Ile	Gln	Thr	Ile	Ser	Arg	Ala	Ala	Leu	Ala	Gln	Leu	Leu	Lys	Leu	125	130	135	
Glu	Glu	Leu	His	Leu	Asp	Asp	Asn	Ser	Ile	Ser	Thr	Val	Gly	Val	140	145	150	
Glu	Asp	Gly	Ala	Phe	Arg	Glu	Ala	Ile	Ser	Leu	Lys	Leu	Leu	Phe	155	160	165	
Leu	Ser	Lys	Asn	His	Leu	Ser	Ser	Val	Pro	Val	Gly	Leu	Pro	Val	170	175	180	
Asp	Leu	Gln	Glu	Leu	Arg	Val	Asp	Glu	Asn	Arg	Ile	Ala	Val	Ile	185	190	195	
Ser	Asp	Met	Ala	Phe	Gln	Asn	Leu	Thr	Ser	Leu	Glu	Arg	Leu	Ile	200	205	210	
Val	Asp	Gly	Asn	Leu	Leu	Thr	Asn	Lys	Gly	Ile	Ala	Glu	Gly	Thr	215	220	225	
Phe	Ser	His	Leu	Thr	Lys	Leu	Lys	Glu	Phe	Ser	Ile	Val	Arg	Asn	230	235	240	
Ser	Leu	Ser	His	Pro	Pro	Pro	Asp	Leu	Pro	Gly	Thr	His	Leu	Ile	245	250	255	
Arg	Leu	Tyr	Leu	Gln	Asp	Asn	Gln	Ile	Asn	His	Ile	Pro	Leu	Thr	260	265	270	

560	565	570
Arg Tyr Thr Ser Gln Lys Trp Lys Tyr	Asn Arg Gly Arg Arg Lys	
575	580	585
Asp Asp Tyr Cys Glu Ala Gly Thr Lys	Lys Asp Asn Ser Ile Leu	
590	595	600
Glu Met Thr Glu Thr Ser Phe Gln Ile	Val Ser Leu Asn Asn Asp	
605	610	615
Gln Leu Leu Lys Gly Asp Phe Arg Leu	Gln Pro Ile Tyr Thr Pro	
620	625	630
Asn Gly Gly Ile Asn Tyr Thr Asp Cys	His Ile Pro Asn Asn Met	
635	640	645
Arg Tyr Cys Asn Ser Ser Val Pro Asp	Leu Glu His Cys His Thr	
650	655	660

<210> 116
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 116
 cggtctacct gtagggcaac c 21

<210> 117
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 117
 gcaggacaac cagataaacc ac 22

<210> 118
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 118
 acgcagattt gagaaggctg tc 22

<210> 119
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe
 <400> 119
 ttcacgggct gctcttgccc agctcttgaa gcttgaagag ctgcac 46

<210> 120
 <211> 2857
 <212> DNA
 <213> Homo Sapien

<400> 120
 tgaagagtaa tagttggaat caaaagagtc aacgcaatga actgttattt 50
 actgctgcgt tttatgttgg gaattcctct cctatggcct tgtcttggag 100
 caacagaaaa ctctcaaaca aagaaagtca agcagccagt gcgatctcat 150
 ttgagagtga agcgtggctg ggtgtggaac caatTTTTTg taccagagga 200
 aatgaatacg actagtcatc acatcggcca gctaagatct gatttagaca 250
 atggaaacaa ttctttccag tacaagcttt tgggagctgg agctggaagt 300
 actttttatca ttgatgaaag aacaggtgac atatatgcc aacagaagct 350
 tgatagagag gagcgatccc tctacatctt aagagcccag gtaatagaca 400
 tcgctactgg aagggtgtg gaacctgagt ctgagtttgt catcaaagtt 450
 tcggatatca atgacaatga accaaaattc ctagatgaac cttatgaggc 500
 cattgtacca gagatgtctc cagaaggaac attagttatc caggtgacag 550
 caagtgatgc tgacgatccc tcaagtggta ataatgctcg tctcctctac 600
 agcttacttc aaggccagcc atatttttct gttgaaccaa caacaggagt 650
 cataagaata tcttctaaaa tggatagaga actgcaagat gagtattggg 700
 taatcattca agccaaggac atgattggtc agccaggagc gttgtctgga 750
 acaacaagtg tattaattaa actttcagat gttaatgaca ataagcctat 800
 atttaaagaa agtttatacc gcttgactgt ctctgaatct gcacccactg 850
 ggacttctat aggaacaatc atggcatatg ataatgacat aggagagaat 900
 gcagaaatgg attacagcat tgaagaggat gattcgcaaa catttgacat 950
 tattactaat catgaaactc aagaaggaat agttatatta aaaaagaaag 1000
 tggattttga gcaccagaac cactacggta ttagagcaaa agttaaaaaac 1050
 catcatgttc ctgagcagct catgaagtac cacttgagg cttccaccac 1100
 tttcattaag atccaggtgg aagatgttga tgagcctcct cttttcctcc 1150

ttccatatta tgtatttgaa gtttttgaag aaacccaca gggatcattt 1200
 gtaggcgtgg tgtctgccac agaccagac aataggaaat ctctatcag 1250
 gtattctatt actaggagca aagtgttcaa tatcaatgat aatggtacaa 1300
 tcaactacaag taactcactg gatcgtgaaa tcagtgcctg gtacaaccta 1350
 agtattacag ccacagaaaa atacaatata gaacagatct ctctgatccc 1400
 actgtatgtg caagttctta acatcaatga tcatgctcct gagttctctc 1450
 aatactatga gacttatgtt tgtgaaaatg caggctctgg tcaggtaatt 1500
 cagactatca gtgcagtggg tagagatgaa tccatagaag agcaccattt 1550
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 aaccttcaag aagaacctgt cttctacatc tccatcttaa ttgccgacaa 1700
 tggaatcccg tcacttacia gtacaaacac ccttaccatc catgtctgtg 1750
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 ctttccatgg gattcaagac agaagttatc attgctattc tcatttgcac 1850
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 gaaaacagat tctatttctc gagaaaagtg aagatttcag agagaatata 1950
 ttccaatatg atgatgaagg ggggtggagaa gaagatacag aggcctttga 2000
 tatagcagag ctgaggagta gtaccataat gcgggaacgc aagactcgga 2050
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aatgtaggaa gatattaaaa gtagatgaga ggacacaaga tgtagtcgat 2650
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 cgagaaaatt taaaggagca aaaatttgca agtcaaataag aaatgtacaa 2750
 atcgagataa catttacatt tctatcatat tgacatgaaa attgaaaatg 2800
 tatagtcaga gaaattttca tgaattattc catgaagtat tgtttccttt 2850
 atttaaa 2857

<210> 121
 <211> 772
 <212> PRT
 <213> Homo Sapien

<400> 121
 Met Asn Cys Tyr Leu Leu Leu Arg Phe Met Leu Gly Ile Pro Leu
 1 5 10 15
 Leu Trp Pro Cys Leu Gly Ala Thr Glu Asn Ser Gln Thr Lys Lys
 20 25 30
 Val Lys Gln Pro Val Arg Ser His Leu Arg Val Lys Arg Gly Trp
 35 40 45
 Val Trp Asn Gln Phe Phe Val Pro Glu Glu Met Asn Thr Thr Ser
 50 55 60
 His His Ile Gly Gln Leu Arg Ser Asp Leu Asp Asn Gly Asn Asn
 65 70 75
 Ser Phe Gln Tyr Lys Leu Leu Gly Ala Gly Ala Gly Ser Thr Phe
 80 85 90
 Ile Ile Asp Glu Arg Thr Gly Asp Ile Tyr Ala Ile Gln Lys Leu
 95 100 105
 Asp Arg Glu Glu Arg Ser Leu Tyr Ile Leu Arg Ala Gln Val Ile
 110 115 120
 Asp Ile Ala Thr Gly Arg Ala Val Glu Pro Glu Ser Glu Phe Val
 125 130 135
 Ile Lys Val Ser Asp Ile Asn Asp Asn Glu Pro Lys Phe Leu Asp
 140 145 150
 Glu Pro Tyr Glu Ala Ile Val Pro Glu Met Ser Pro Glu Gly Thr
 155 160 165
 Leu Val Ile Gln Val Thr Ala Ser Asp Ala Asp Asp Pro Ser Ser
 170 175 180
 Gly Asn Asn Ala Arg Leu Leu Tyr Ser Leu Leu Gln Gly Gln Pro
 185 190 195
 Tyr Phe Ser Val Glu Pro Thr Thr Gly Val Ile Arg Ile Ser Ser

				200					205					210
Lys	Met	Asp	Arg	Glu 215	Leu	Gln	Asp	Glu	Tyr 220	Trp	Val	Ile	Ile	Gln 225
Ala	Lys	Asp	Met	Ile 230	Gly	Gln	Pro	Gly	Ala 235	Leu	Ser	Gly	Thr	Thr 240
Ser	Val	Leu	Ile	Lys 245	Leu	Ser	Asp	Val	Asn 250	Asp	Asn	Lys	Pro	Ile 255
Phe	Lys	Glu	Ser	Leu 260	Tyr	Arg	Leu	Thr	Val 265	Ser	Glu	Ser	Ala	Pro 270
Thr	Gly	Thr	Ser	Ile 275	Gly	Thr	Ile	Met	Ala 280	Tyr	Asp	Asn	Asp	Ile 285
Gly	Glu	Asn	Ala	Glu 290	Met	Asp	Tyr	Ser	Ile 295	Glu	Glu	Asp	Asp	Ser 300
Gln	Thr	Phe	Asp	Ile 305	Ile	Thr	Asn	His	Glu 310	Thr	Gln	Glu	Gly	Ile 315
Val	Ile	Leu	Lys	Lys 320	Lys	Val	Asp	Phe	Glu 325	His	Gln	Asn	His	Tyr 330
Gly	Ile	Arg	Ala	Lys 335	Val	Lys	Asn	His	His 340	Val	Pro	Glu	Gln	Leu 345
Met	Lys	Tyr	His	Thr 350	Glu	Ala	Ser	Thr	Thr 355	Phe	Ile	Lys	Ile	Gln 360
Val	Glu	Asp	Val	Asp 365	Glu	Pro	Pro	Leu	Phe 370	Leu	Leu	Pro	Tyr	Tyr 375
Val	Phe	Glu	Val	Phe 380	Glu	Glu	Thr	Pro	Gln 385	Gly	Ser	Phe	Val	Gly 390
Val	Val	Ser	Ala	Thr 395	Asp	Pro	Asp	Asn	Arg 400	Lys	Ser	Pro	Ile	Arg 405
Tyr	Ser	Ile	Thr	Arg 410	Ser	Lys	Val	Phe	Asn 415	Ile	Asn	Asp	Asn	Gly 420
Thr	Ile	Thr	Thr	Ser 425	Asn	Ser	Leu	Asp	Arg 430	Glu	Ile	Ser	Ala	Trp 435
Tyr	Asn	Leu	Ser	Ile 440	Thr	Ala	Thr	Glu	Lys 445	Tyr	Asn	Ile	Glu	Gln 450
Ile	Ser	Ser	Ile	Pro 455	Leu	Tyr	Val	Gln	Val 460	Leu	Asn	Ile	Asn	Asp 465
His	Ala	Pro	Glu	Phe 470	Ser	Gln	Tyr	Tyr	Glu 475	Thr	Tyr	Val	Cys	Glu 480
Asn	Ala	Gly	Ser	Gly 485	Gln	Val	Ile	Gln	Thr 490	Ile	Ser	Ala	Val	Asp 495

<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 122
cttgactgtc tctgaatctg caccc 25

<210> 123
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 123
aagtgggtgga agcctccagt gtgg 24

<210> 124
<211> 52
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 124
ccactacggt attagagcaa aagttaaaaa ccatcatggt tcctggagca 50
gc 52

<210> 125
<211> 1152
<212> DNA
<213> Homo Sapien

<400> 125
cttcagaaca gggtctcctt cccagtcac cagttgctcg agttagaatt 50
gtctgcaatg gccgccctgc agaaatctgt gagctctttc cttatgggga 100
ccctggccac cagctgcctc cttctcttgg ccctcttggt acagggagga 150
gcagctgcgc ccatcagctc ccactgcagg cttgacaagt ccaacttcca 200
gcagccctat atcaccaacc gcaccttcat gctggctaag gaggctagct 250
tggtctgataa caacacagac gtctgtctca ttggggagaa actgttccac 300
ggagtcagta tgagtgcgc ctgctatctg atgaagcagg tgctgaactt 350
cacccttgaa gaagtgtgt tccctcaatc tgataggttc cagccttata 400
tgcaggaggt ggtgcccttc ctggccaggc tcagcaacag gctaagcaca 450

tgtcatattg aaggtgatga cctgcatatc cagaggaatg tgcaaaagct 500
gaaggacaca gtgaaaaagc ttggagagag tggagagatc aaagcaattg 550
gagaactgga tttgctgttt atgtctctga gaaatgcctg catttgacca 600
gagcaaagct gaaaaatgaa taactaacc cctttccctg ctagaaataa 650
caattagatg ccccaaagcg atttttttta accaaaagga agatgggaag 700
ccaaactcca tcatgatggg tggattccaa atgaaccctt gcgttagtta 750
caaaggaaac caatgccact tttgtttata agaccagaag gtagactttc 800
taagcataga tattttattga taacatttca ttgtaactgg tgttctatac 850
acagaaaaca atttatTTTT taaataattg tctttttcca taaaaaagat 900
tactttccat tccttttaggg gaaaaaacc ctaaatagct tcatgtttcc 950
ataatcagta ctttatattt ataaatgtat ttattattat tataagactg 1000
cattttattt atatcatttt attaatatgg atttatttat agaaacatca 1050
ttcgatattg ctacttgagt gtaaggctaa tattgatatt tatgacaata 1100
attatagagc tataacatgt ttatttgacc tcaataaaca cttggatatc 1150
cc 1152

<210> 126
<211> 179
<212> PRT
<213> Homo Sapien

<400> 126
Met Ala Ala Leu Gln Lys Ser Val Ser Ser Phe Leu Met Gly Thr
1 5 10 15
Leu Ala Thr Ser Cys Leu Leu Leu Leu Ala Leu Leu Val Gln Gly
20 25 30
Gly Ala Ala Ala Pro Ile Ser Ser His Cys Arg Leu Asp Lys Ser
35 40 45
Asn Phe Gln Gln Pro Tyr Ile Thr Asn Arg Thr Phe Met Leu Ala
50 55 60
Lys Glu Ala Ser Leu Ala Asp Asn Asn Thr Asp Val Arg Leu Ile
65 70 75
Gly Glu Lys Leu Phe His Gly Val Ser Met Ser Glu Arg Cys Tyr
80 85 90
Leu Met Lys Gln Val Leu Asn Phe Thr Leu Glu Glu Val Leu Phe
95 100 105
Pro Gln Ser Asp Arg Phe Gln Pro Tyr Met Gln Glu Val Val Pro

	110		115		120									
Phe	Leu	Ala	Arg	Leu	Ser	Asn	Arg	Leu	Ser	Thr	Cys	His	Ile	Glu
	125				130									135
Gly	Asp	Asp	Leu	His	Ile	Gln	Arg	Asn	Val	Gln	Lys	Leu	Lys	Asp
	140							145						150
Thr	Val	Lys	Lys	Leu	Gly	Glu	Ser	Gly	Glu	Ile	Lys	Ala	Ile	Gly
	155							160						165
Glu	Leu	Asp	Leu	Leu	Phe	Met	Ser	Leu	Arg	Asn	Ala	Cys	Ile	
	170								175					

<210> 127
 <211> 2557
 <212> DNA
 <213> Homo Sapien

<400> 127
 gccctaacct tcccagggct cagctctttg gagctgcca ttctccggc 50
 tgcgagaaaag gacgcgcgcc ctgcgtcggg cgaagaaaag aagcaaaact 100
 tgtcgggagg gtttcgtcat caacctcctt cccgcaaacc taaacctcct 150
 gccggggcca tccctagaca gaggaaagtt cctgcagagc cgaccagccc 200
 tagtggatct ggggcaggca gcggcgctgg ctgtggaatt agatctgttt 250
 tgaaccacgt ggagcgcac gctggggctc ggaagtcacc gtccgcgggc 300
 accgggttg cgctgcccga gtggaaccga cagtttgca gctcggctg 350
 caagtggcct ctctccccg cggttgttgt tcagtgtcgg gtgagggctg 400
 cgagtgtggc aagttgcaaa gagagcctca gaggtccgaa gagcgtgcg 450
 ctctactcgc cgttcgttc ttctcttct cggttcccta ctgtgaaatc 500
 gcagcgacat ttacaaaggc ctccgggtcc taccgagacc gatccgcagc 550
 gtttggcccc gtctgccta ttgcatcggg agccccgag caccggcgaa 600
 atggcgaggt tcccgaaggc cgacctggcc gctgcaggag ttatgttact 650
 ttgccacttc ttcacggacc agtttcagtt cgccgatggg aaaccggag 700
 accaaatcct tgattggcag tatggagtta ctcaggcctt ccctcacaca 750
 gaggaggagg tggaagttga ttcacacgcg tacagccaca ggtggaaaag 800
 aaacttggaac tttctcaagg cggtagacac gaaccgagca agcgtcggcc 850
 aagactctcc tgagcccaga agcttcacag acctgctgct ggatgatggg 900
 caggacaata aactcagat cgaggaggat acagaccaca attactatat 950

atctcgaata tatggtccat ctgattctgc cagccgggat ttatgggtga 1000
 acatagacca aatggaaaaa gataaagtga agattcatgg aatattgtcc 1050
 aatactcatc ggcaagctgc aagagtgaat ctgtccttcg attttccatt 1100
 ttatggccac ttcctacgtg aaatcactgt ggcaaccggg ggtttcatat 1150
 aactggaga agtcgtacat cgaatgctaa cagccacaca gtacatagca 1200
 cctttaatgg caaatttcga tcccagtgtg tccagaaatt caactgtcag 1250
 atattttgat aatggcacag cacttgtggt ccagtgggac catgtacatc 1300
 tccaggataa ttataacctg ggaagcttca cattccaggc aaccctgctc 1350
 atggatggac gaatcatctt tggatacaaa gaaattcctg tcttggtcac 1400
 acagataagt tcaaccaatc atccagtga agtcggactg tccgatgcat 1450
 ttgtcgttgt ccacaggatc caacaaattc ccaatgttcg aagaagaaca 1500
 atttatgaat accaccgagt agagctacaa atgtcaaaaa ttaccaacat 1550
 ttcggctgtg gagatgaccc cattaccac atgcctccag ttaacagat 1600
 gtggccccctg tgtatcttct cagattggct tcaactgcag ttggtgtagt 1650
 aaacttcaaa gatgttccag tggatttgat cgtcatcggc aggactgggt 1700
 ggacagtgga tgccctgaag agtcaaaaga gaagatgtgt gagaatacag 1750
 aaccagtgga aacttcttct cgaaccacca caaccgtagg agcgacaacc 1800
 acccagttca gggtcctaac taccaccaga agagcagtga cttctcagtt 1850
 tcccaccagc ctccctacag aagatgatac caagatagca ctacatctaa 1900
 aagataatgg agcttctaca gatgacagtg cagctgagaa gaaaggggga 1950
 accctccacg ctggcctcat cattggaatc ctcatcctgg tcctcattgt 2000
 agccacagcc attcttgtga cagtctatat gtatcaccac ccaacatcag 2050
 cagccagcat cttctttatt gagagacgcc caagcagatg gcctgcgatg 2100
 aagtttagaa gaggctctgg acatcctgcc tatgctgaag ttgaaccagt 2150
 tggagagaaa gaaggcttta ttgtatcaga gcagtgctaa aatttctagg 2200
 acagaacaac accagtactg gtttacaggt gttaagacta aaattttgcc 2250
 tataccttta agacaaacaa acaaacacac acacaaacaa gctctaagct 2300
 gctgtagcct gaagaagaca agatttctgg acaagctcag ccagggaaac 2350
 aaagggtaaa caaaaaacta aaacttatac aagataccat ttacactgaa 2400

catagaattc cctagtggaa tgtcatctat agttcactcg gaacatctcc 2450
 cgtggactta tctgaagtat gacaagatta taatgctttt ggcttaggtg 2500
 caggggttgca aagggatcag aaaaaaaaaa tcataataaa gcttttagttc 2550
 atgaggg 2557

<210> 128
 <211> 529
 <212> PRT
 <213> Homo Sapien

<400> 128
 Met Ala Arg Phe Pro Lys Ala Asp Leu Ala Ala Ala Gly Val Met
 1 5 10 15
 Leu Leu Cys His Phe Phe Thr Asp Gln Phe Gln Phe Ala Asp Gly
 20 25 30
 Lys Pro Gly Asp Gln Ile Leu Asp Trp Gln Tyr Gly Val Thr Gln
 35 40 45
 Ala Phe Pro His Thr Glu Glu Glu Val Glu Val Asp Ser His Ala
 50 55 60
 Tyr Ser His Arg Trp Lys Arg Asn Leu Asp Phe Leu Lys Ala Val
 65 70 75
 Asp Thr Asn Arg Ala Ser Val Gly Gln Asp Ser Pro Glu Pro Arg
 80 85 90
 Ser Phe Thr Asp Leu Leu Leu Asp Asp Gly Gln Asp Asn Asn Thr
 95 100 105
 Gln Ile Glu Glu Asp Thr Asp His Asn Tyr Tyr Ile Ser Arg Ile
 110 115 120
 Tyr Gly Pro Ser Asp Ser Ala Ser Arg Asp Leu Trp Val Asn Ile
 125 130 135
 Asp Gln Met Glu Lys Asp Lys Val Lys Ile His Gly Ile Leu Ser
 140 145 150
 Asn Thr His Arg Gln Ala Ala Arg Val Asn Leu Ser Phe Asp Phe
 155 160 165
 Pro Phe Tyr Gly His Phe Leu Arg Glu Ile Thr Val Ala Thr Gly
 170 175 180
 Gly Phe Ile Tyr Thr Gly Glu Val Val His Arg Met Leu Thr Ala
 185 190 195
 Thr Gln Tyr Ile Ala Pro Leu Met Ala Asn Phe Asp Pro Ser Val
 200 205 210
 Ser Arg Asn Ser Thr Val Arg Tyr Phe Asp Asn Gly Thr Ala Leu
 215 220 225

Val	Val	Gln	Trp	Asp	His	Val	His	Leu	Gln	Asp	Asn	Tyr	Asn	Leu	230	235	240
Gly	Ser	Phe	Thr	Phe	Gln	Ala	Thr	Leu	Leu	Met	Asp	Gly	Arg	Ile	245	250	255
Ile	Phe	Gly	Tyr	Lys	Glu	Ile	Pro	Val	Leu	Val	Thr	Gln	Ile	Ser	260	265	270
Ser	Thr	Asn	His	Pro	Val	Lys	Val	Gly	Leu	Ser	Asp	Ala	Phe	Val	275	280	285
Val	Val	His	Arg	Ile	Gln	Gln	Ile	Pro	Asn	Val	Arg	Arg	Arg	Thr	290	295	300
Ile	Tyr	Glu	Tyr	His	Arg	Val	Glu	Leu	Gln	Met	Ser	Lys	Ile	Thr	305	310	315
Asn	Ile	Ser	Ala	Val	Glu	Met	Thr	Pro	Leu	Pro	Thr	Cys	Leu	Gln	320	325	330
Phe	Asn	Arg	Cys	Gly	Pro	Cys	Val	Ser	Ser	Gln	Ile	Gly	Phe	Asn	335	340	345
Cys	Ser	Trp	Cys	Ser	Lys	Leu	Gln	Arg	Cys	Ser	Ser	Gly	Phe	Asp	350	355	360
Arg	His	Arg	Gln	Asp	Trp	Val	Asp	Ser	Gly	Cys	Pro	Glu	Glu	Ser	365	370	375
Lys	Glu	Lys	Met	Cys	Glu	Asn	Thr	Glu	Pro	Val	Glu	Thr	Ser	Ser	380	385	390
Arg	Thr	Thr	Thr	Thr	Val	Gly	Ala	Thr	Thr	Thr	Gln	Phe	Arg	Val	395	400	405
Leu	Thr	Thr	Thr	Arg	Arg	Ala	Val	Thr	Ser	Gln	Phe	Pro	Thr	Ser	410	415	420
Leu	Pro	Thr	Glu	Asp	Asp	Thr	Lys	Ile	Ala	Leu	His	Leu	Lys	Asp	425	430	435
Asn	Gly	Ala	Ser	Thr	Asp	Asp	Ser	Ala	Ala	Glu	Lys	Lys	Gly	Gly	440	445	450
Thr	Leu	His	Ala	Gly	Leu	Ile	Ile	Gly	Ile	Leu	Ile	Leu	Val	Leu	455	460	465
Ile	Val	Ala	Thr	Ala	Ile	Leu	Val	Thr	Val	Tyr	Met	Tyr	His	His	470	475	480
Pro	Thr	Ser	Ala	Ala	Ser	Ile	Phe	Phe	Ile	Glu	Arg	Arg	Pro	Ser	485	490	495
Arg	Trp	Pro	Ala	Met	Lys	Phe	Arg	Arg	Gly	Ser	Gly	His	Pro	Ala	500	505	510
Tyr	Ala	Glu	Val	Glu	Pro	Val	Gly	Glu	Lys	Glu	Gly	Phe	Ile	Val			

Ser Glu Gln Cys

<210> 129
 <211> 4834
 <212> DNA
 <213> Homo Sapien

<220>
 <221> unsure
 <222> 3784
 <223> unknown base

<400> 129
 gcagccctag cagggatgga catgatgctg ttggtgcagg gtgcttggtg 50
 ctgaaccag tggctggcgg cgggtgctcct cagcctgtgc tgcctgctac 100
 cctcctgcct cccggctgga cagagtgtgg acttcccctg ggcggccgtg 150
 gacaacatga tggtcagaaa aggggacacg gcggtgctta ggtgttattt 200
 ggaagatgga gcttcaaagg gtgcctggct gaaccggctca agtattattt 250
 ttgcgggagg tgataagtgg tcagtggatc ctcgagtttc aatttcaaca 300
 ttgaataaaa gggactacag cctccagata cagaatgtag atgtgacaga 350
 tgatggccca tacacgtgtt ctgttcagac tcaacatata ccagaacaa 400
 tgcaggtgca tctaactgtg caagttcctc ctaagatata tgacatctca 450
 aatgatatga ccgtcaatga aggaaccaac gtcactctta cttgtttggc 500
 cactgggaaa ccagagcctt ccatttcttg gcgacacatc tccccatcag 550
 caaaaccatt tgaaaatgga caatatttgg acatttatgg aattacaagg 600
 gaccaggctg gggaatatga atgcagtgcg gaaaatgatg tgtcattccc 650
 agatgtgagg aaagtaaaag ttgttgtaa ctttgctcct actattcagg 700
 aaattaaatc tggcaccgtg acccccggac gcagtggcct gataagatgt 750
 gaaggtgcag gtgtgccgcc tccagccttt gaatggtaca aaggagagaa 800
 gaagctcttc aatggccaac aaggaattat tattcaaat tttagcaca 850
 gatccattct cactgttacc aacgtgacac aggagcactt cggcaattat 900
 acttgtgtgg ctgccaacaa gctaggcaca accaatgoga gcctgcctct 950
 taaccctcca agtacagccc agtatggaat taccgggagc gctgatgttc 1000
 ttttctctg ctggtacctt gtgttgacac tgtcctcttt caccagcata 1050

ttctacctga agaatgccat tctacaataa attcaaagac ccataaaagg 1100
cttttaagga ttctctgaaa gtgctgatgg ctggatccaa tctggtacag 1150
tttggtaaaa gcagcgtggg atataatcag cagtgcctac atggggatga 1200
tcgccttctg tagaattgct cattatgtaa atactttaat tctactcttt 1250
tttgattagc tacattacct tgtgaagcag tacacattgt ccttttttta 1300
agacgtgaaa gctctgaaat tacttttaga ggatattaat tgtgatttca 1350
tgtttgtaat ctacaacttt tcaaaagcat tcagtcattg tctgctaggt 1400
tgcaggctgt agtttacaaa aacgaatatt gcagtgaata tgtgattcct 1450
taaggctgca atacaagcat tcagttccct gtttcaataa gagtcaatcc 1500
acatttacaa agatgcattt ttttcttttt tgataaaaaa gcaaataata 1550
ttgccttcag attatttctt caaaatataa cacatatcta gatttttctg 1600
ctcgcatgat attcaggttt caggaatgag ccttgtaata taactggctg 1650
tgcagctctg cttctctttc ctgtaagttc agcatgggtg tgccttcata 1700
caataatatt tttctctttg tctccaacta atataaaatg ttttgctaaa 1750
tcttacaatt tgaaagtaaa aataaaccag agtgatcaag ttaaaccata 1800
cactatctct aagtaacgaa ggagctattg gactgtaaaa atctcttcct 1850
gcactgacaa tggggtttga gaattttgcc ccacactaac tcagttcttg 1900
tgatgagaga caatttaata acagtatagt aaatatacca tatgatttct 1950
ttagttgtag ctaaagtta gatccaccgt gggaaatcat tccctttaa 2000
atgacagcac agtccactca aaggattgcc tagcaataca gcatcttttc 2050
ctttcactag tccaagccaa aaattttaag atgatttgtc agaaagggca 2100
caaagtccta tcacctaata ttacaagagt tggtaagcgc tcatcattaa 2150
ttttattttg tggcagctaa gttagtatga cagaggcagt gctcctgtgg 2200
acaggagcat tttgcatatt ttccatctga aagtatcact cagttgatag 2250
tctggaatgc atgttatata ttttaaaact tccaaaatat attataacaa 2300
acattctata tcggtatgta gcagaccaat ctctaaaata gctaattctt 2350
caataaaatc tttctatata gccatttcag tgcaaacaag taaaatcaaa 2400
aaagaccatc ctttattttt ccttacatga tatatgtaag atgogatcaa 2450
ataaagacaa aacaccagtg atgagaatat cttaagataa gtaattatca 2500

80	85	90
Val Ser Ile Ser Thr Leu Asn Lys Arg	Asp Tyr Ser Leu Gln Ile	
95	100	105
Gln Asn Val Asp Val Thr Asp Asp Gly	Pro Tyr Thr Cys Ser Val	
110	115	120
Gln Thr Gln His Thr Pro Arg Thr Met	Gln Val His Leu Thr Val	
125	130	135
Gln Val Pro Pro Lys Ile Tyr Asp Ile	Ser Asn Asp Met Thr Val	
140	145	150
Asn Glu Gly Thr Asn Val Thr Leu Thr	Cys Leu Ala Thr Gly Lys	
155	160	165
Pro Glu Pro Ser Ile Ser Trp Arg His	Ile Ser Pro Ser Ala Lys	
170	175	180
Pro Phe Glu Asn Gly Gln Tyr Leu Asp	Ile Tyr Gly Ile Thr Arg	
185	190	195
Asp Gln Ala Gly Glu Tyr Glu Cys Ser	Ala Glu Asn Asp Val Ser	
200	205	210
Phe Pro Asp Val Arg Lys Val Lys Val	Val Val Asn Phe Ala Pro	
215	220	225
Thr Ile Gln Glu Ile Lys Ser Gly Thr	Val Thr Pro Gly Arg Ser	
230	235	240
Gly Leu Ile Arg Cys Glu Gly Ala Gly	Val Pro Pro Pro Ala Phe	
245	250	255
Glu Trp Tyr Lys Gly Glu Lys Lys Leu	Phe Asn Gly Gln Gln Gly	
260	265	270
Ile Ile Ile Gln Asn Phe Ser Thr Arg	Ser Ile Leu Thr Val Thr	
275	280	285
Asn Val Thr Gln Glu His Phe Gly Asn	Tyr Thr Cys Val Ala Ala	
290	295	300
Asn Lys Leu Gly Thr Thr Asn Ala Ser	Leu Pro Leu Asn Pro Pro	
305	310	315
Ser Thr Ala Gln Tyr Gly Ile Thr Gly	Ser Ala Asp Val Leu Phe	
320	325	330
Ser Cys Trp Tyr Leu Val Leu Thr Leu	Ser Ser Phe Thr Ser Ile	
335	340	345
Phe Tyr Leu Lys Asn Ala Ile Leu Gln		
350		

<210> 131

<211> 823

<212> DNA
<213> Homo Sapien

<400> 131
atagtagaag aatgtctctg aaattactgg atgagtttca gtcatacttt 50
cacatgggca caatttcaca ttcaagctcc ttatcctagg ctaattttat 100
attatgttaa atcacttggt tttgttctca cggcttcctg cctgctatag 150
gcataattac gaggaagcag aacttctcca gaagcaagcg cacatgcgtt 200
ccaaaataag agcaaattcg ctctaaacac aggaaaagac ctgaagcttt 250
aattaagggg ttacatccaa cccagagcg cttttgtggg cactgattgc 300
tccagcttct gcgtcactgc gcgaggggaag agggaagagg atccaggcgt 350
tagacatgta tagacacaaa aacagctgga gattgggctt aaaataccca 400
ccaagctcca aagaagagac ccaagtcccc aaaacattga tttcagggct 450
gccaggaagg aagagcagca gcaggggtggg agagaagctc cagtcagccc 500
acaagatgcc attgtcccc ggctcctgc tgctgctgct ctccggggcc 550
acggccaccg ctgccctgcc cctggagggt ggccccaccg gccgagacag 600
cgagcatatg caggaagcgg caggaataag gaaaagcagc ctctgactt 650
tcctcgcttg gtggtttgag tggacctccc aggccagtgc cggggccctc 700
ataggagagg aagctcgga ggtggccagg cggcaggaag gcgcaccccc 750
ccagcaatcc gcgcgccggg acagaatgcc ctgcaggaac ttcttctgga 800
agaccttctc ctctgcaaa tag 823

<210> 132
<211> 155
<212> PRT
<213> Homo Sapien

<400> 132
Met Tyr Arg His Lys Asn Ser Trp Arg Leu Gly Leu Lys Tyr Pro
1 5 10 15
Pro Ser Ser Lys Glu Glu Thr Gln Val Pro Lys Thr Leu Ile Ser
20 25 30
Gly Leu Pro Gly Arg Lys Ser Ser Ser Arg Val Gly Glu Lys Leu
35 40 45
Gln Ser Ala His Lys Met Pro Leu Ser Pro Gly Leu Leu Leu Leu
50 55 60
Leu Leu Ser Gly Ala Thr Ala Thr Ala Ala Leu Pro Leu Glu Gly
65 70 75

Gly	Pro	Thr	Gly	Arg	Asp	Ser	Glu	His	Met	Gln	Glu	Ala	Ala	Gly
				80					85					90
Ile	Arg	Lys	Ser	Ser	Leu	Leu	Thr	Phe	Leu	Ala	Trp	Trp	Phe	Glu
				95					100					105
Trp	Thr	Ser	Gln	Ala	Ser	Ala	Gly	Pro	Leu	Ile	Gly	Glu	Glu	Ala
				110					115					120
Arg	Glu	Val	Ala	Arg	Arg	Gln	Glu	Gly	Ala	Pro	Pro	Gln	Gln	Ser
				125					130					135
Ala	Arg	Arg	Asp	Arg	Met	Pro	Cys	Arg	Asn	Phe	Phe	Trp	Lys	Thr
				140					145					150
Phe	Ser	Ser	Cys	Lys										
				155										

<210> 133
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 133
 tcagggctgc caggaaggaa gagc 24

<210> 134
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 134
 gcaggaggag aaggtcttcc agaagaag 28

<210> 135
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 135
 agaagttcca gtcagcccac aagatgccat tgtcccccg cctcc 45

<210> 136
 <211> 1875
 <212> DNA
 <213> Homo Sapien

<400> 136
 gtcgtgtgct tggaggaagc cgcggaaccc ccagcgtccg tccatggcgt 50

ggagccttgg gagctggctg ggtggctgcc tgctggtgtc agcattggga 100
 atggtaccac ctcccgaaaa tgtcagaatg aattctgtta atttcaagaa 150
 cattctacag tgggagtcac ctgcttttgc caaagggaaac ctgactttca 200
 cagctcagta cctaagttat aggatattcc aagataaatg catgaatact 250
 accttgacgg aatgtgattt ctcaagtott tccaagtatg gtgaccacac 300
 cttgagagtc agggctgaat ttgcagatga gcattcagac tgggtaaaca 350
 tcaccttctg tctgtggat gacaccatta ttggaccccc tggaatgcaa 400
 gtagaagtac ttgctgattc ttacatatg cgtttcttag cccctaaaat 450
 tgagaatgaa tacgaaactt ggactatgaa gaatgtgtat aactcatgga 500
 cttataatgt gcaatactgg aaaaacggta ctgatgaaaa gtttcaaatt 550
 actccccagt atgactttga ggtcctcaga aacctggagc catggacaac 600
 ttattgtgtt caagtctgag ggtttcttcc tgatcggaac aaagctgggg 650
 aatggagtga gcctgtctgt gagcaaacaa cccatgacga aacgggtccc 700
 tcttgatgg tggccgtcat cctcatggcc tcggtcttca tggctctgct 750
 ggcactcctc ggctgcttct ccttgcctgt gtgcgtttac aagaagacaa 800
 agtaagcctt ctccctagg aattctcttc cacagcacct gaaagagttt 850
 ttggggccatc ctcatcataa cacacttctg tttttctcct ttccattgtc 900
 ggatgagaat gatgtttttg acaagctaag tgtcattgca gaagactctg 950
 agagcggcaa gcagaatcct ggtgacagct gcagcctcgg gaccccgct 1000
 gggcaggggc cccaaagcta ggctctgaga aggaaacaca ctgggctggg 1050
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 atactccatt tgggaactca ctgccttata aaggctttca tgatgttttc 1250
 agaagttggc cactgagagt gtaattttca gccttttata tcactaaaat 1300
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 ttctaccaga ttatggatgg actgatctga aaatcgacct caactcaagg 1750
 gtggtcagct caatgctaca cagagcacgg acttttggat tctttgcagt 1800
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 ccattaaagt tttactctgt gttgc 1875

<210> 137

<211> 325

<212> PRT

<213> Homo Sapien

<400> 137

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Ser	Ala	Leu	Gly	Met	Val	Pro	Pro	Pro	Glu	Asn	Val	Arg	Met	Asn
				20					25					30
Ser	Val	Asn	Phe	Lys	Asn	Ile	Leu	Gln	Trp	Glu	Ser	Pro	Ala	Phe
				35					40					45
Ala	Lys	Gly	Asn	Leu	Thr	Phe	Thr	Ala	Gln	Tyr	Leu	Ser	Tyr	Arg
				50					55					60
Ile	Phe	Gln	Asp	Lys	Cys	Met	Asn	Thr	Thr	Leu	Thr	Glu	Cys	Asp
				65					70					75
Phe	Ser	Ser	Leu	Ser	Lys	Tyr	Gly	Asp	His	Thr	Leu	Arg	Val	Arg
				80					85					90
Ala	Glu	Phe	Ala	Asp	Glu	His	Ser	Asp	Trp	Val	Asn	Ile	Thr	Phe
				95					100					105
Cys	Pro	Val	Asp	Asp	Thr	Ile	Ile	Gly	Pro	Pro	Gly	Met	Gln	Val
				110					115					120
Glu	Val	Leu	Ala	Asp	Ser	Leu	His	Met	Arg	Phe	Leu	Ala	Pro	Lys
				125					130					135
Ile	Glu	Asn	Glu	Tyr	Glu	Thr	Trp	Thr	Met	Lys	Asn	Val	Tyr	Asn
				140					145					150
Ser	Trp	Thr	Tyr	Asn	Val	Gln	Tyr	Trp	Lys	Asn	Gly	Thr	Asp	Glu
				155					160					165
Lys	Phe	Gln	Ile	Thr	Pro	Gln	Tyr	Asp	Phe	Glu	Val	Leu	Arg	Asn
				170					175					180

Leu Glu Pro Trp Thr Thr Tyr Cys Val Gln Val Arg Gly Phe Leu
185 190 195

Pro Asp Arg Asn Lys Ala Gly Glu Trp Ser Glu Pro Val Cys Glu
200 205 210

Gln Thr Thr His Asp Glu Thr Val Pro Ser Trp Met Val Ala Val
215 220 225

Ile Leu Met Ala Ser Val Phe Met Val Cys Leu Ala Leu Leu Gly
230 235 240

Cys Phe Ser Leu Leu Trp Cys Val Tyr Lys Lys Thr Lys Tyr Ala
245 250 255

Phe Ser Pro Arg Asn Ser Leu Pro Gln His Leu Lys Glu Phe Leu
260 265 270

Gly His Pro His His Asn Thr Leu Leu Phe Phe Ser Phe Pro Leu
275 280 285

Ser Asp Glu Asn Asp Val Phe Asp Lys Leu Ser Val Ile Ala Glu
290 295 300

Asp Ser Glu Ser Gly Lys Gln Asn Pro Gly Asp Ser Cys Ser Leu
305 310 315

Gly Thr Pro Pro Gly Gln Gly Pro Gln Ser
320 325

<210> 138
<211> 2570
<212> DNA
<213> Homo Sapien

<400> 138
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gccgccgccg ctgctggcgg agatgccccg ccggggcaaaa tcgcggtggg 150
tggggctggg attgggggct ctgctgtggc ccattttctc cagcagcact 200
ttggacctcg ggtgcagatc gacgtgtacg agaaggggaac cgtgggtggc 250
cgcttgGCCA ccatctcagt caacaagcag cactatgaga gcggggctgc 300
ctccttcac tccctgagcc tgcacatgca ggacttcgtc aagctgctgg 350
ggctgaggca ccggcgcgag gtgggtgggca ggagcgccat cttcggcggg 400
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cgtcgtctcc ttggtccacg gctacctcaa ctgctctac ttcggtttcc 1100
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tgagtgggc gccagctcc gtggagggtga tggccgtggc tgccaagaat 1450
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gagagcctgg gaactttcat ccccaactga agatggatca tcccacagca 1600
gccaggact gaataagcca tgctogcca ccaggcttct ttctgacccc 1650
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gaagactacg ggagggaata taaggcagag aactatgagt cttattttat 1900
tactgttttt cactacctac tcccacaatg gacaatcaat tgaggcaacc 1950
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atcagaaaac ctaagaaatg atcatagctc ctgggttactg tggacttgat 2050
 ggatttgaag tacctagttc agaactccct agtcaccatc tccaagcctg 2100
 tcaacatcac tgcatttgg aggagatgac tgtggttagga cccaaggaag 2150
 agatgtgtgc ctgaatagtc gtcaccatat ctccaagctt cctggcaacc 2200
 agtgggaaaa gaaacatgcg aggctgtagg aagagggaag ctcttccttg 2250
 gcacctagag gaattagcca ttctcttctt tatgcaaaga ttgaggaatg 2300
 caacaatata aagaagagaa gtccccagat ggtagagagc agtcatatct 2350
 taccctaga tggtcatccc agcagaagaa agaagaaggt gttggggtag 2400
 gattcttcag aggttagcct ggtactttct catcagacac tagcttgaag 2450
 taagaggaga attatgcttt tctttgcttt ttctacaaac ccttaaaaat 2500
 cacttgtttt aaaaagaaag taaaagccct tttcattcaa aaaaaaaaaa 2550
 aaaaaaaaaa aaaaaaaaaa 2570

<210> 139
 <211> 494
 <212> PRT
 <213> Homo Sapien

<400> 139
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 20 25 30
 Val Val Gly Ala Gly Ile Gly Gly Ser Ala Val Ala His Phe Leu
 35 40 45
 Gln Gln His Phe Gly Pro Arg Val Gln Ile Asp Val Tyr Glu Lys
 50 55 60
 Gly Thr Val Gly Gly Arg Leu Ala Thr Ile Ser Val Asn Lys Gln
 65 70 75
 His Tyr Glu Ser Gly Ala Ala Ser Phe His Ser Leu Ser Leu His
 80 85 90
 Met Gln Asp Phe Val Lys Leu Leu Gly Leu Arg His Arg Arg Glu
 95 100 105
 Val Val Gly Arg Ser Ala Ile Phe Gly Gly Glu His Phe Met Leu
 110 115 120
 Glu Glu Thr Asp Trp Tyr Leu Leu Asn Leu Phe Arg Leu Trp Trp
 125 130 135
 His Tyr Gly Ile Ser Phe Leu Arg Leu Gln Met Trp Val Glu Glu

				140					145					150
Val	Met	Glu	Lys	Phe 155	Met	Arg	Ile	Tyr	Lys 160	Tyr	Gln	Ala	His	Gly 165
Tyr	Ala	Phe	Ser	Gly 170	Val	Glu	Glu	Leu	Leu 175	Tyr	Ser	Leu	Gly	Glu 180
Ser	Thr	Phe	Val	Asn 185	Met	Thr	Gln	His	Ser 190	Val	Ala	Glu	Ser	Leu 195
Leu	Gln	Val	Gly	Val 200	Thr	Gln	Arg	Phe	Ile 205	Asp	Asp	Val	Val	Ser 210
Ala	Val	Leu	Arg	Ala 215	Ser	Tyr	Gly	Gln	Ser 220	Ala	Ala	Met	Pro	Ala 225
Phe	Ala	Gly	Ala	Met 230	Ser	Leu	Ala	Gly	Ala 235	Gln	Gly	Ser	Leu	Trp 240
Ser	Val	Glu	Gly	Gly 245	Asn	Lys	Leu	Val	Cys 250	Ser	Gly	Leu	Leu	Lys 255
Leu	Thr	Lys	Ala	Asn 260	Val	Ile	His	Ala	Thr 265	Val	Thr	Ser	Val	Thr 270
Leu	His	Ser	Thr	Glu 275	Gly	Lys	Ala	Leu	Tyr 280	Gln	Val	Ala	Tyr	Glu 285
Asn	Glu	Val	Gly	Asn 290	Ser	Ser	Asp	Phe	Tyr 295	Asp	Ile	Val	Val	Ile 300
Ala	Thr	Pro	Leu	His 305	Leu	Asp	Asn	Ser	Ser 310	Ser	Asn	Leu	Thr	Phe 315
Ala	Gly	Phe	His	Pro 320	Pro	Ile	Asp	Asp	Val 325	Gln	Gly	Ser	Phe	Gln 330
Pro	Thr	Val	Val	Ser 335	Leu	Val	His	Gly	Tyr 340	Leu	Asn	Ser	Ser	Tyr 345
Phe	Gly	Phe	Pro	Asp 350	Pro	Lys	Leu	Phe	Pro 355	Phe	Ala	Asn	Ile	Leu 360
Thr	Thr	Asp	Phe	Pro 365	Ser	Phe	Phe	Cys	Thr 370	Leu	Asp	Asn	Ile	Cys 375
Pro	Val	Asn	Ile	Ser 380	Ala	Ser	Phe	Arg	Arg 385	Lys	Gln	Pro	Gln	Glu 390
Ala	Ala	Val	Trp	Arg 395	Val	Gln	Ser	Pro	Lys 400	Pro	Leu	Phe	Arg	Thr 405
Gln	Leu	Lys	Thr	Leu 410	Phe	Arg	Ser	Tyr	Tyr 415	Ser	Val	Gln	Thr	Ala 420
Glu	Trp	Gln	Ala	His 425	Pro	Leu	Tyr	Gly	Ser 430	Arg	Pro	Thr	Leu	Pro 435

Arg	Phe	Ala	Leu	His	Asp	Gln	Leu	Phe	Tyr	Leu	Asn	Ala	Leu	Glu
				440					445					450
Trp	Ala	Ala	Ser	Ser	Val	Glu	Val	Met	Ala	Val	Ala	Ala	Lys	Asn
				455					460					465
Val	Ala	Leu	Leu	Ala	Tyr	Asn	Arg	Trp	Tyr	Gln	Asp	Leu	Asp	Lys
				470					475					480
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				485					490					

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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 140
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<210> 141
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 141
 caggcttaca atgttatgat cagaca 26

<210> 142
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 142
 tattcagagt tttccattgg cagtgccagt t 31

<210> 143
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 143
 ggccttgacag acaaccgt 18

<210> 144
 <211> 21

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 144
 cagactgagg gagatccgag a 21

 <210> 145
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 145
 gcagattttg aggacagcca cctcca 26

 <210> 146
 <211> 18
 <212> DNA
 <213> Artificial Sequence

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 <400> 146
 catcaagcgc ctctacca 18

 <210> 147
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 147
 cacaaactcg aactgcttct g 21

 <210> 148
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 148
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 <210> 149
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 <212> DNA
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<220>
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<400> 149
ggcagagact tccagtcact ga 22

<210> 150
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<220>
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<400> 150
gccaaaggggtg gtgttagata gg 22

<210> 151
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<212> DNA
<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 151
caggccccct tgatctgtac ccca 24

119